

14th Meeting of Heads of European Schools of Architecture

Doing more with less:

Architectural Education in challenging times

Host: Center for Mediterranean Architecture

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DOING MORE WITH LESS

ARCHITECTURAL EDUCATION IN CHALLENGING TIMES

EDITORS CONSTANTIN SPIRIDONIDIS | MARIA VOYATZAKI

14th Meeting of Heads of European Schools of Architecture

Doing more with less:

Architectural Education in challenging times

Transactions on Architectural Education No 56

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Despite the attempt to transcribe with accuracy the debates from the workshop, the editors wish to apologise in advance for any inaccuracies of the interventions of individuals that could be attributed to the quality of recording.

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The contributions included in the present volume are fewer than the presentations made during the 14th Meeting of Heads. The majority of authors and respective panel members sent us their edited texts but some of them did not.

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Acknowledgements

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We would like to thank all the participants for contributing to the panels with their pertinent comments, and remarks to the themes of the Meeting that gave to it the value of an interesting academic event.

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Constantin Spiridonidis and Maria Voyatzaki

Constantin Spiridonidis and **Maria Voyatzaki**

**Doing more with less:
Architectural Education
in challenging times**

In the last ten years at least, architectural education is experiencing a growing competition among schools of architecture, emerging from the growing competition of the degrees schools offer in an increasingly difficult and competitive professional market. The rapid transformation of the international economy, the considerable changes in the international political environment, the quick development of technology and communications, the transformations of the institutional framework of higher education are the main reasons of the shift in our educational strategies and pedagogical attitudes into a more demanding, comprehensive, responsive, adaptive and sustainable education of future architects. To be adapted to these unstable, fluid, and unpredictable environment, schools of architecture proceed to reforms of their curricula, renovate their technological infrastructure, redefine their policy of international contacts and collaborations, create new programs delivering new degrees and educational possibilities in order to remain competitive as higher education Institutions. All these practices demand more energy, more human resources, more coordinated actions, more strategic decision-making, and more money.

On the other hand, most of the countries in Europe and worldwide are experiencing a financial crisis which directly affects the affordance of the public and private domain. Significant cuts have been made recently to our education institutions which bring schools of architecture in the difficult position to reduce their operational and further development finances, to reconsider their strategic objectives and mission statements, to redistribute their human resources between education research and administration, to eliminate unsustainable programs and activities, to look for external funding not always under terms and conditions which do not affect directly the academic profile of the institutions.

There is a progressive elimination of resources the same time that the demand for more services, quality and efficiency is growing. Schools of Architecture are asked by society to become more qualified, more useful, more updated, more efficient, more productive, more sustainable, more responsive, more competitive, more innovative, more research productive in the same moment that the political system asks them to be less expensive, less energy-time-and-human-resources consuming. There are no signs that this situation is temporary and that we will very soon come back to the conditions we had in the eighties or nineties. On the contrary, it becomes increasingly evident that we are in the beginning of a new era where architectural education, and higher education in general, has to develop in a new framework of principles, strategies and priorities dominated by the significant cuts of funding from the public domain and by the progressive reduction of the private sector's support.

The 14th Meeting of Heads of European Schools focused on the problems raised from the above-mentioned situation. All Heads of European Schools were invited to participate and to map the spectrum of different types of problems emerging

in the everyday life of our academic institutions, to investigate collectively possible approaches to these problems, to elaborate in common possible lines of action, to develop proposals for appropriate strategies for the education we offer, to re-define the mission of architectural education in challenging times where there is an imperative demand to do more with less. This volume presents the interventions and the debates that took place during the 14th meeting of Heads of European Schools of Architecture.

As in all previous years, the Meeting was structured upon four sessions. The first session was entitled “Doing more with less finances”. In the last years, most of the Schools of Architecture in Europe have suffered significant budgets cuts. This has direct consequences on the development plan of the institutions, the modernization and extension of the available technical infrastructure, the support of students' educational activities out of the school, the support of staff development, the organization of academic events, the import of knowledge in the school. On the other hand schools, in order to be competitive, must imperatively follow their mission statements, must permanently update their infrastructure, need to support their staff development, are obliged to encourage the exchange of ideas by hosting events and personalities from other educational environments. How can we then assure the quality of the education we are offering in this context? Which types of actions have we already implemented to deal with this situation? Are there any possibilities for collective initiatives that schools could develop? Are there any threads for the nature and the actual profile of our institutions? The reader can find different views on these questions presented by the introductory panel as well as a broad spectrum of ideas and reflections raised by the long discussions among all participants.

The second session entitled “Doing more with less human resources” focused on the impact of the financial crisis on the academic management of the human resources of schools. The human capital of our schools is directly affected by the crisis. The recruitment of new staff members becomes increasingly difficult and the retirement of the existing staff does not have an immediate replacement, not always for no reason. The downsizing of the human capital of the schools has a direct impact on the staff /student ratio, as the number of students, in most cases, cannot be reduced since it affects directly public funding. The reduction of staff affects its mobility, its academic development and updating, its overall performance and its research contribution. The main question that schools have now is how they can protect and enhance the quality of their education under these circumstances. They examine different management strategies, different teaching schemes, different curriculum structures expecting in their effort to overcome, to a certain extent, this situation.

The sessions through the introductory presentations and the debates following gave the possibility to a number of interesting ideas, experiences and proposals to be shared among the participants.

The third session focused on the question of time in architectural education and the impact the crisis has on it. The session entitled “Doing more with less time” had as its main theme the duration of studies. Even though the majority of the architectural education community agrees that the minimum necessary duration of architectural studies is five years, pressure for the reduction of this duration to four years seems to be imposed by the political system. Four years of studies means 25% reduction of the cost of education and this appears to be compatible with the European Directive, which defines this length as the minimum necessary for architectural studies. The possibility to have three 'semesters' of 15 weeks per academic year is another idea aiming at the reduction of the duration of the education of the architect without reducing education time. The session, through presentations and debates, investigated the current views of the architectural education community about this fundamental issue.

The fourth session was entitled “Doing more with less teaching”. It goes without saying that the reduction of funds and of human resources also affects the way of teaching. The implementation of the European Credit Transfer System gave the possibility to reduce the teaching time without reducing the respective credits as the reduced time can be compensated by the students' workload. In parallel the overall educational system promotes competences, which enhance the capacity of the student to navigate through the offered learning possibilities and to develop a personal path with experimentations on personal interests. This attitude has as a consequence to convey a part of educational responsibilities to the learner permitting the reduction of teaching time requesting, in the same time, a more efficient pedagogy to be implemented. Does this situation lead to the development of new teaching approaches and pedagogies nowadays? There is certainly an imperative request for a more efficient teaching, which will assure quality under the condition of reduced finances, reduced teaching staff and reduced education time. Are our schools prepared to implement more efficient teaching approaches? Do we know how to do it? The session gave the possibility to a fruitful exchange of ideas, practices and information among participants.

With this volume the editors wish to offer to the participants of the Meeting as well as to the broader architectural education community material for further examination, reading and consultancy. As the transcription of the oral speeches to written text is always a risky exercise especially when it is done by another person, we kindly ask for the sympathy of participants in case that some of their ideas and

thoughts were unintentionally falsified or distorted by the editing of this volume. To reduce this risk we have asked the persons participating in the panels to submit their presentation in written form in order to have more articulated presentation of their interventions. Unfortunately, not all of them responded to our claim. This explains why there are some inconsequence between the realised program of the event and the contents of the sessions. We really hope that this volume will reflect the constructive atmosphere, the positive spirit, the collaborative attitude and the friendly mood in which this Meeting, as all the previous ones, developed. This atmosphere is a necessary factor for the sustainability of the event and for the impact of its work to the future of architectural education.

Keynote

Manuel DeLanda

USA

**The Role of Cities
in the New Philosophy of History**

The work of economic historian Fernand Braudel, exemplified by his three volume book entitled "Civilization and Capitalism"¹, has provided philosophers not only with the raw materials for a new conception of material and economic history, but also with several new concepts, such as the coexistence of several temporal scales informing the flow of history. The new economic data unearthed by Braudel and his school, cries out for philosophical interpretation, as it contradicts much of what standard accounts have to say on the subject, specifically, the rigid periodizations of history that we have become accustomed to, such as a division of Western history into feudal, capitalist and socialist modes of production, or its division into agricultural, industrial and information ages. Yet, the challenge to these internally homogeneous periods by the wealth of detail produced by Braudel, a vast data base which suggests a much more heterogeneous picture, can be easily accommodated by minor changes in standard models, such as the re-periodization proposed by Emmanuel Wallerstein and his disciples, in which history is now subdivided into shorter "phases", Italian, Dutch, British and American phases of capitalism. This cosmetic fixes, however, entail a distortion of Braudel's ideas to make them conform with Marxist methodology. I believe, and I will try to argue my case in this essay, that a much deeper set of philosophical changes are necessary to meet the Braudelian challenge.

One of the philosophical consequences of taking this challenge seriously, is directly ontological, that is, concerned with what a philosophy takes as truly existing in the world. Specifically, we have become accustomed since the nineteenth century, to speak of "society as a whole", sometimes justifying this by invoking Hegelian totalities, some other times by using the organism as a metaphor, and viewing society as a functional totality. The new ontological stance that I am proposing, on the other hand, does not include totalities of any kind, or more exactly, it refuses to simply assume systematicity. The new ontology does include wholes that are more than the sum of their parts, but in each case it demands to know what specific historical process gave rise to that whole, that is, it demands to know the source of its systematicity. We might say that an ontology which simply assumes the existence of wholes follows a top-down approach (from the taken-for-granted whole to the parts that it constitutes) while the new approach is bottom-up, that is, it approaches entities at any given level of scale (the level of nation states, or cities, or institutions, or individual decision-makers) in terms of populations of interacting entities at the level immediately below. In other words, the new ontology includes only "emergent wholes".

Methodologically, this philosophical maneuver implies a rejection of the theoretical foundations of both orthodox economics as well as orthodox sociology. Although the former (neoclassical microeconomics) does begin its analysis at the bottom of society, at the level of the individual decision-maker, it does so in such a way that it atomizes these components, each one of which is modeled as

maximizing his or her individual satisfaction (marginal utility) in isolation from the others. Each decision-maker is further atomized by assuming that the decisions in question are made on a case-by-case basis, constrained only by budgetary limitations, leaving out of consideration the question of norms and values that constrain individual action in a variety of ways. Orthodox sociology (whether functionalist or marxist-structuralist), on the other hand, takes as its point of departure society as a whole, and only rarely attempts to explain in detail the exact historical processes through which collective social institutions have emerged out of the interactions among individuals. More importantly, it denies these individuals their own ontological status, viewing them as constituted by the totality within which they are inscribed.

Fortunately, the last few decades have witnessed the birth and growth of a synthesis of economic and sociological ideas (going under the banner of “neo-institutional economics”), as exemplified by the work of authors such as Douglas North, Viktor Vanberg and Oliver Williamson. This new school (or set of schools) rejects the atomism of neoclassical economists as well as the holism of structuralist and functionalist sociologists. It preserves “methodological individualism” (as it should be in a bottom-up perspective) but rejects the idea that individuals make decisions following their own internal (maximizing) calculations, and instead models them as rule-followers subjected to different types of normative and institutional constraints that apply collectively. On the other hand, neo-institutionalism rejects the “methodological holism” of sociology but it preserves what we may call its “ontological holism”, that is, the idea that even though collective institutions emerge out the interactions between individuals, once they have formed these institutions have “a life of their own”, that is, they are not just reified entities, and are capable of affecting individual decision-making in many different ways.²

One difference between the neo-institutionalist approach and the one I am trying to sketch here is that beyond the level of the individual organization (specific bureaucratic agencies, stock markets, banks and other financial institutions and so on) the neo-institutionalist does not seem to envision yet another emergent larger-scale entity but simply refers to “society” or “the polity” as a whole. This, however, runs the risk of introducing too much homogeneity into our models and of suggesting that human societies form a “totality”, that is, an entity on a higher ontological plane than individual institutions and individual human beings. On the contrary, we must carry the same line of thought further, and view interacting institutions as giving rise to yet other emergent structures, such as specific urban centers. Including concrete cities in our analysis (instead of referring to “society” or “culture” in the abstract) enables us to model historically emergent wholes that do not form totalities but simply larger-scale individual entities. In other words, the new ontology includes only “individuals”, organic, institutional or urban individu-

als, existing on the same ontological plane, but operating at very different space and time scales. Although Braudel does not explicitly refer to these ontological matters, it is clear that his conception of history as comprising several temporal scales of different duration must be given some physical underpinning beyond the mere existence of economic cycles of different lengths. A flattened ontology made up of emergent individual wholes, each operating at different scales, could provide such a basis.

An ontology of differently scaled individuals also reduces the danger of taking too much social uniformity for granted, a charge often made against functionalist versions of sociology. Individual cities (and nation-states) are easier to visualize as encompassing a variety of communities within their borders, and if, as a matter of empirical fact, a given city (or nation-state) displays a high degree of cultural homogeneity, this itself becomes something to be modeled as the result of concrete historical processes, that is, something in need of philosophical explanation, not something to be taken for granted as a point of departure for analysis. For example, a landlocked city may play the role of political capital for a given region and encourage a certain degree of uniformity in its own culture and that of the hierarchy of smaller towns under its command. Here one could mention Paris, Vienna or Madrid as examples, all three landlocked capitals which over time synthesized a more or less homogeneous culture which was later exported to smaller provincial towns. On the contrary, a city may act as a gateway to foreign cultures, as was the case of many maritime metropolises in the past, like Venice, Amsterdam or New York, forming not hierarchies but networks with other such gateways, and promoting the entry and diffusion of heterogeneous materials that increase its diversity and that of the cities in close contact with it. We would not expect the same degree of cultural uniformity in these networks of gateways than in the hierarchies of towns just mentioned, hierarchies which, by the way, played a pivotal role in organizing the territories which would later become nation-states.

A similar point applies to the populations of individual institutions that inhabit a given city. These should be modeled not as forming simple, homogeneous systems, but complex, heterogeneous ecologies, unless, as before, one can specify a historical process to account for a high degree of uniformity. It is at this level of scale that Braudel makes one of his most surprising assertions. We have become accustomed to view economic institutions as forming a simple totality, either a free-market or a capitalist system. But Braudel has shown just how mistaken this can be. As he writes: "We should not be too quick to assume that capitalism embraces the whole of western society, that it accounts for every stitch in the social fabric...that our societies are organized from top to bottom in a 'capitalist system'. On the contrary, ...there is a dialectic still very much alive between capitalism on one hand, and its antithesis, the 'non-capitalism' of the lower level

on the other.”³ This lower level he identifies with individual markets and he adds that, indeed, capitalism was carried upward and onward on the shoulders of small shops and “the enormous creative powers of the market, of the lower storey of exchange... [This] lowest level, not being paralyzed by the size of its plant or organization, is the one readiest to adapt; it is the seed bed of inspiration, improvisation and even innovation, although its most brilliant discoveries sooner or later fall into the hands of the holders of capital. It was not the capitalists who brought about the first cotton revolution; all the new ideas came from enterprising small businesses.”⁴

Several things follow from Braudel’s distinction between market and capitalist institutions (or as he calls them “anti-markets”). If markets and anti-markets have never been the same thing then both those who believe in the angelical magic of the invisible hand as well as those who demonize market transactions as involving a “commodification”, are wrong, the former because spontaneous coordination by an invisible hand does not apply to big business, and the latter because commodity fetishism does not apply to the products created by small business, but only to large hierarchical organizations capable of manipulating demand to create artificial needs. In other words, for people on the right and center of the political spectrum all monetary transactions, even if they involve large oligopolies or even monopolies, are considered market transactions. For the Marxist left, on the other hand, the very presence of money, regardless of whether it involves economic power or not, means that a social transaction has now been commodified and hence made part of capitalism. It is my belief that Braudel’s empirical data forces on us to make a distinction which is not made by the left or the right: that between market and antimarket institutions, and hence to view the institutional ecologies which inhabit urban centers, even within the restricted world of economics, as more heterogeneous than we have so far allowed.

It is important to mention that the distinction between markets and anti-markets is a matter of scale, like the difference between retail and wholesale, since it is large scale that allows certain institutions to manipulate demand and supply. Moreover, a similar distinction applies when one views economics from the point of view not of trade, but of production. Let me illustrate this point by contrasting two types of wealth-generating economic processes, one of which depends on homogenization for its efficiency while the other relies on an articulation of heterogeneities from which it derives network externalities. The first one is the most familiar one, and we commonly refer to it as “economies of scale”. Here the basic principle is the production of large runs of more or less homogeneous products, the cost of each replica decreasing as the scale of production increases. By standardizing production, costs can be spread across a large number of identical units, and in this way the law of diminishing returns can be overcome. Yet, historically

there have been other connections between efficiency and size: not the size of a homogenized enterprise and its homogeneous mass-produced products, but the size of a large, highly heterogeneous city which provides small firms with a variety of mutually-stimulating links. These are not economies of scale, but economies of agglomeration: In the words of two Braudelian economic historians who have studied these two processes:

"[Economies of agglomeration] come from the fact that the firm can find in the large city all manner of clients, services, suppliers, and employees no matter how specialized its product; this, in turn, promotes increased specialization.

Surprisingly, however, economies of agglomeration encourage firms of the same line to locate close to one another, which is why names such as Harley Fleet, and Lombard streets and Seville Row -to stick to London- call to mind professions rather than place. Besides the non-negligible profit and pleasure of shop-talk, all can share access to services that none could support alone...A key point about economies of agglomeration is that small businesses depend on them more than do large ones. The latter can internalize these 'external economies' by providing their own services and gain locational freedom as a result...The relationship between large cities and small business is a symbiotic one beneficial to both. The reason is that small firms are the major carriers of innovation, including creative adaptation to change. This was even more true in the days before scientific research contributed much to new technology".⁵

The key to economies to agglomeration is that networks of small producers are the site for the constant exchange of knowledge. Whether we are considering informal know-how or formal knowledge, small scale industry has traditionally used information as one of its main inputs with increasing regularity. And large, diversified cities were centers where information accumulated and multiplied. The innovations to which these economies of agglomeration led made these cities pioneers in many new industrial products and processes, which would later be exported to the centers of heavy industry once they had been routinized. "The nature of information as an input to production is that it ceases to be important once a given process becomes routine. At that point other costs -for machines, basic labor, and space -take over, and central cities are at a serious disadvantage. Moreover, economies of scale become critical and ...very large cities are not especially favored locations for the largest enterprises."⁶

Today, the clearest examples of economies of agglomeration come not from large cities, but from the industrial hinterlands these cities animate at a distance. They are also linked to specific institutions, particularly knowledge-producing institutions, such as universities. Well studied cases include Silicon Valley, an industrial region animated by cities like San Francisco, and a region in northern Italy called Emilia-Romagna, containing cities like Bologna and Modena. Though in both cases

we have a hybrid phenomenon, that is, they include large organizations operating on economies of scale, the main component in both regions are networks of small producers competing not so much at the level of costs, but at the level of product design, and growing not by vertical or horizontal integration, but by continuous splitting and specialization. The success of these regional economies, and their proven resiliency to economic downturns, have made them in the eyes of the scholars who have researched them, alternative paradigms to corporate capitalism. Moreover, the two paradigms, the corporate and the regional, have different consequences for the future of urban centers. Large corporations, having internalized a variety of functions, hence having become largely self-contained, have also acquired geographical mobility. This process has transformed them into potential city-killers: when the tax-structure of a particular city or region becomes too costly, a corporation can move away, and having internalized most of the information and know-how needed to operate, it takes away this reservoir of knowledge. Regional economies, on the other hand, develop knowledge outside the individual firms, spreading it through the constant movement of engineers and designers, enriching the region which they inhabit, and making it impossible to move firms elsewhere.⁷

A different type of hidden-cost involved in economies of scale relates to the effects that the routinization of production has on the human body and its flexible skills. Historically, understanding these effects also implies thinking of economic institutions as part of a larger institutional ecology, an ecology that must include military institutions. In particular, many of the most oppressive aspects of industrial discipline, and of the use of machines to control human workers in assembly line factories, were not originated by capitalists but by military engineers in eighteenth century French and nineteenth century American arsenals and armories. Without exaggeration, these and other military institutions created many of the techniques used to withdraw control of the production process from workers and then exported these techniques to civilian enterprises, typically anti-market organizations.⁸ In some cases, this process led to a “de-skilling” of a segment of the population, as the flexible know-how of artisans was replaced by rigid routines, further contributing to the erosion of the reservoir of knowledge in some industrial regions. Hence, not to include in our economic models processes occurring within this wider institutional ecology can make invisible the source of the very structures we must change to create a better society, and hence diminish our chances of ever dismantling those oppressive structures.

I would like to conclude this brief sketch of the changes which a flattened ontology of differently scaled individual entities could bring to a philosophy of history, by quoting Fernand Braudel on the political consequences of his views. As the example of city-killing shows, as do other examples of the many hidden-costs of corporate capitalism, the consequences of this switch in ontological commit-

ments are not merely academic. As Braudel puts it: "If we are prepared to make an unequivocal distinction between the market economy and capitalism, might this offer us a way of avoiding that 'all or nothing' which politicians are always putting to us, as if it was impossible to retain the market economy without giving the monopolies a free hand, without nationalizing everything in sight?... As long as the solutions put forward amount to replacing the monopoly of capital with the monopoly of the State, compounding the faults of the former with those of the latter, it is hardly surprising that the classic left-wing solutions do not arouse great electoral enthusiasm. If people set about looking for them, seriously and honestly, economic solutions could be found which would extend the area of the market and would put at its disposal the economic advantages so far kept to itself by one dominant group of society."⁹

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Session 1

Doing more with less finances

There are significant cuts in all school budgets. This has direct consequences on the development plan of the institutions, the modernization and extension of the available technical infrastructure, the support of students educational activities out of the school, the support of staff development, the organization of academic events, the import of knowledge in the school... On the other hand schools, in order to be competitive, must imperatively follow their mission statements, must permanently update their infrastructure, need to support their staff development, are obliged to encourage the exchange of ideas by hosting events and personalities from other educational environments.

How can we assure the quality of the education we are offering under the above conditions?

Which types of actions we have already implemented to deal with this situation?

Are there any possibilities for collective initiatives that schools could develop?

Are there any threads for the nature and the actual profile of our institutions?

Is the request for 'less' always genuine and related to the crisis or could it be also artificial and opportunistically driven?

Are there any threads for the quality of the education we are offering?

If the quality of the education we are offering is also depended upon finances, to what extent can our ethics and this quality be negotiated?



Chair:

Per Olaf Fjeld, Oslo, Norway

Introductory panel:

Manuel Jorge Rodrigues Da Costa, Lisbon, Portugal

Javier Quintana De Uña, Madrid/Segovia, Spain

Ava Llopis Reyna, València, Spain

Renato Masiani, Rome, Italy

Saverio Mecca, Florence, Italy

Rita Pinto de Freitas, Barcelona, Spain

Introductory Panel

Javier Quintana de Uña

Dean, IE School of Architecture and Design, Madrid/Segovia, Spain

New Times, New Models

Introduction

I chose this title, because no matter what we have in mind about recession times, I believe these are unique periods for reflection and redefinition. In fact, I like to see them as the perfect opportunity to change and propose things that might lead us to new developments. As most thinkers agree today, this crisis is not just a financial problem, but the culmination of a cultural period that has become obsolete.

As for the case of our school, it is important to know that IE University and its different schools were created in 2007 -already in the start of the crisis- so all our actions and decisions have been tainted by financial concerns. In a way, we are a part of the crisis.

Not a standard case

Our profile is definitely not average. In fact, IE School of Architecture and Design pretends to contribute to the map of architectural education with a new, very international approach, based on the intersection between design, innovation and management, a professional focus in architectural studies, and the aim to redefine the future architect's role in society. More precisely:

[INTERNATIONAL]



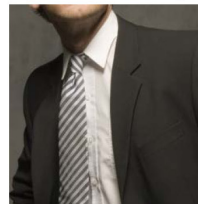
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[INDEPENDENT]



[DAUGHTER IE]



[ENTREPRENEURS]



[BABY SCHOOL]



[MANAGEMENT]



[FULL SERVICE]

- IE School of Architecture and Design is a private and independent school.
- It belongs to a university founded by an international business school (the “daughter” of IE business school).
- It is based in Spain but truly international in scope, student and faculty profile.
- It is a full service school, running programs from undergraduate to masters, executive and postgraduate levels.
- IE focuses on teaching entrepreneurial spirit.
- The School tries to fill some of the existing gaps in architectural education (i.e. re-education for professionals, business implications of design decisions, relationship with practice, etc.).

Finally, being a “baby school,” we have the flexibility to create a new model.

IE structure

Our undergraduate program takes place at the IE College (Segovia) where Architecture students share part of their education with Business, Communication or Psychology students. The IE Graduate Schools are where differentiation and personalities are stronger but still sharing resources. There is an interdisciplinary exchange at all levels, especially with business and finance, and all degrees have a strong business component, the so-called “IE Module”-provided by IE Business School.

In the other direction, all schools provide education (for example, design and creativity workshops) to the students of our business school. This exchange is key, again, to share resources, that is to say, being more efficient financially, while making education more diverse and open.

IE financial key facts

IE is financially independent, with no endowment, fully reliant on tuition fees. In this initial phase, IE Business School surplus is invested in IE University. But IE College’s deficit is rapidly decreasing, since every year the number of admissions is doubling. We pretend to break even in three years. IE key numbers are:

- IE Business School has 2.600 students.
- IE University: has 400 Bologna Students and 400 non-Bologna.
- IE School of Architecture and Design a total of 480 students, divided as follows: undergraduate (290 pre-Bologna + 80 Bologna in 2 tracks Spanish and English); masters: 20 students (only English); others: 90 students (summer schools + workshops).

Our tuition fees are: 18.000 €/year for undergraduate programs; 24.000 €/year in the master’s level. IE Foundation has a very strong program of scholarships that allows talented students to enrol IE under strict parameters of academic performance.



GRAD
SCHOOLS

[SS]

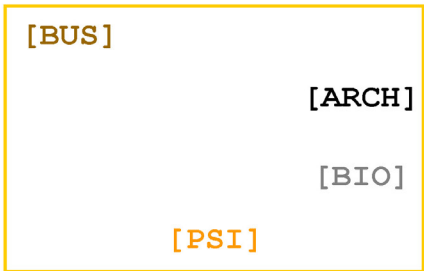
SUMMER
SCHOOLS

[CE]

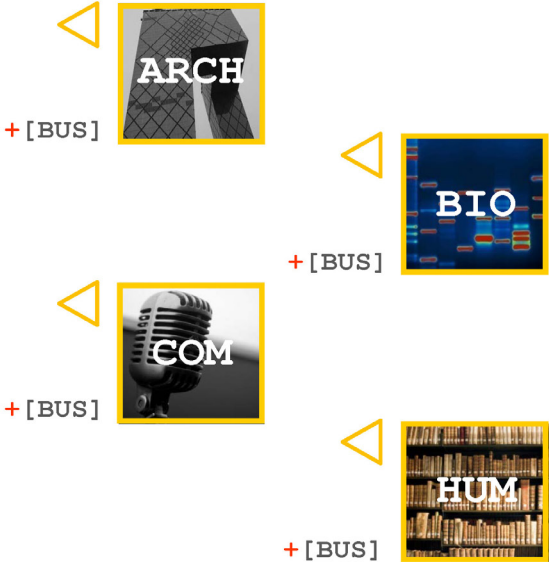
CONTINUING
EDUCATION

OTHERS

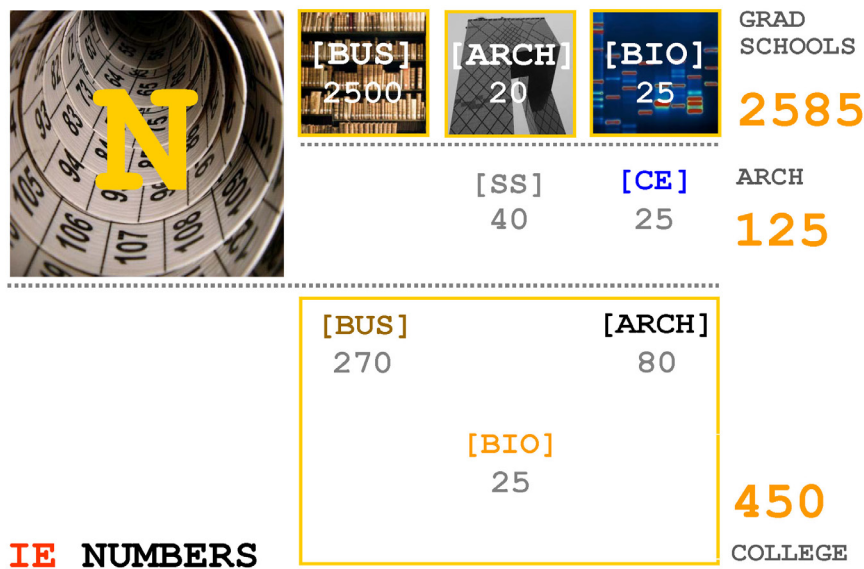
IE
STRUCTURE



COLLEGE



IE **EXCHANGE**



Doing more with less

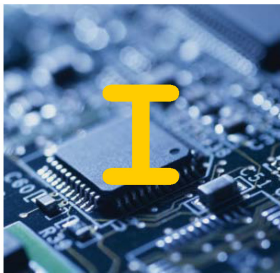
With this structure and profile, IE University has managed to develop mechanisms, which are proving to be financially efficient. These are:

An integrated concept

IE is conceived as one, shared melting pot in continuous adaptation where education and people has a high level of integration. Schools and college share faculty members: teachers are not assigned to schools. We can actually be part programs of other disciplines, i.e. architects teaching creativity to the business people or visual culture to future communicators. IE has also abolished the departmental structure: teachers are not assigned to departments anymore. The specificity of the education is provided by itineraries. And these itineraries are lead by advisors.

We offer dual degrees or a combination of major and minors creating mixes that adapt better to the demands of the market (teenagers are not asking for pure degrees anymore). Most faculty members have a professional profile and are hired according to the itineraries offered that year. Through this, the school is becoming truly interdisciplinary:

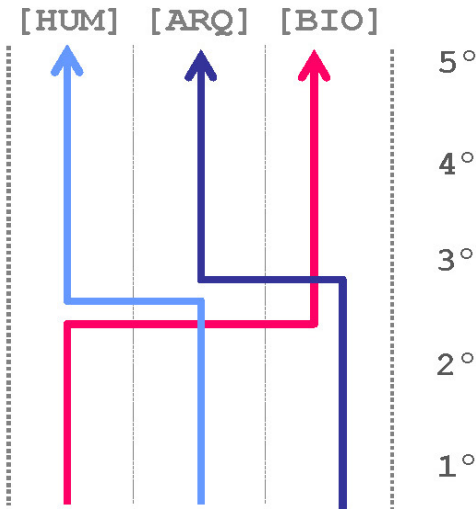
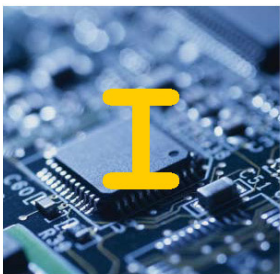
- We have a flexible structure that allows us to respond faster to the needs of the market.
- We are reaching a bigger market with fewer professors, which is key for our development.
- At the same time, students and faculty are creating a very integrated community where architects meet other professionals with ease.



[CON] [STR] [URB] [DSG]



IE
INTEGRATION



IE
ITINERARIES

Innovation and technology

IE has invested a great amount of resources in technology for the classrooms but also to improve teaching methodologies, mainly in our media campus and on line education. Our on line division has been recently ranked #1 in the world by The Economist and Business Week. This is because the sophistication of the technological platform and its conception as customized education as opposed to mass distributed distance learning.

All our programs are blended, combining face to face with online periods. The online technology allows us to have excellent professors from all over the world at a very affordable cost, and students who are professionals –or interns- in our classrooms.

At the undergraduate level, online education has allowed us to launch an internship program where every second semester students work part-time and study the rest of the day. Destinations are highly respected national and international offices and they have an opportunity to experience practice and make some money. The goal is to provide them with two years of professional experience by the time they graduate.

Our online technology also allows us to offer executive education for professionals who are actually a huge market with lots of gaps in their education. It is also a premium market with high expectations, asking for excellence.

And the best is that students love this, since digital communication has transformed their lives into on-line ones.

The search for additional resources

Following an anglo-saxon model, IE has created a network of centres, which enrich the institution and are crucial to our business development. The most relevant are:

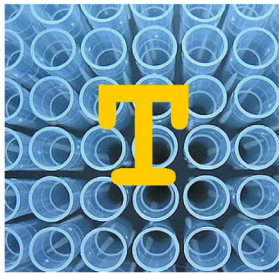
- The IE Foundation: based in New York, the IE Fund does mostly fund-raising and redistributes the 5% of all tuition fees into grants for academically outstanding applicants.
- The Corporate Partners division: a corporate partners division has been created, where all schools coordinate their search for private money from the industry.

At the same time, IE has made two decisions that help to be more financially viable:

- We do not do anything alone so we are growing with the help of others;
- To a certain extent, academics must all push for the professionalization of their teaching contents.

The search for additional markets

The search for the money is crucial, but the search for the market is the most important one, and in this respect, we truly think architecture schools are still a step behind from others that



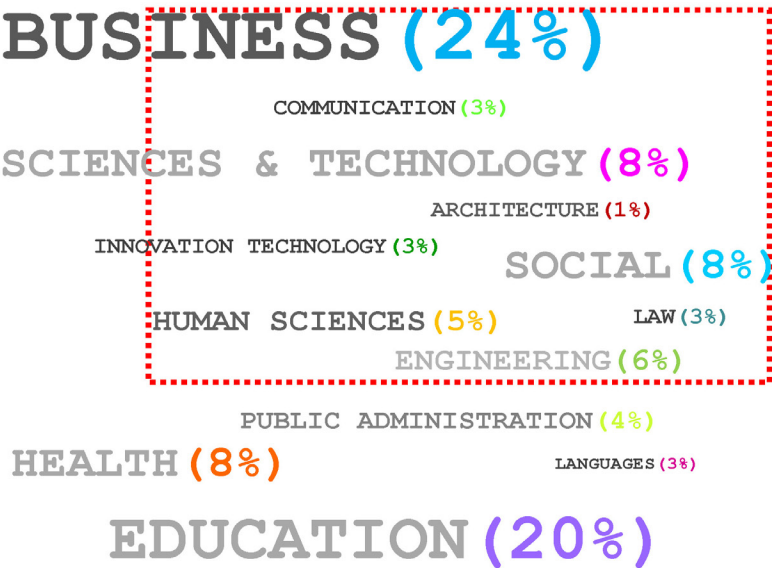
[MADRID]

[SEGOVIA]



IE ONLINE

[THE WORLD]



are adapting better to what the market demands. I have the feeling we are very endogamic institutions, formed by architects and thought for architects...

Let me comment on what I call the “scary map” of architectural education:

We, for example, think our academic world –the world of the architectural education- is big and, in fact, architecture and the architecture and construction sector, accounts in most countries for more than 15% of their Gross Domestic Product. But this map, which shows the distribution of master programs in the United States and the United Kingdom, shows how all our educational effort, the academic world in which live, accounts for less than 1% of the whole pie. (Sources are: Postgraduate Education in the UK and the Us Report, 2010; Graduate Enrolment and Degrees Report: 1999-2009).

Are we really aware of this?

Do we realize that our activity is confined in such little world?

Do we realize that one of the challenges is to go beyond our traditional realm?

Do we realize that if we do not do it, we might loose more and more presence in society and therefore, students?

In a moment of decline in applications, we have to make the most of our capacity of attraction to reach more people like engineers, biologists or business people; people who have a role at some point of the design or construction process. We should open our doors to the other related disciplines and accept in our schools non-architects.

On the other hand, society demands for education in design and creativity, so, please, let's cross our walls, reach out and provide them with what they want. Following this path, we will expand our presence, we will be richer academically speaking, and we will increase the number of students and, therefore, our financial resources.

IE examples

IE School of Architecture and Design has already put in practice this “philosophy of transgression” and launched the following programs where students are not necessary architects:

- “Think_design workshops” at the international MBA on IE Business School (in collaboration with Architectural Association School of Architecture, London. Entitled “revolutionize your space” they are a set of workshops where students from all backgrounds rethink their educational space.
- “City Seminars” lecture series for executive board of top companies like ING, where IE gives background on city trends to companies interested in the future evolution of the urban environment where they clients live.
- IE/Brown MBA: a Master in Business Administration with a high component of design, creativity and humanities focused subject, helping to redefine the education of future managers. A program taught in collaboration with Brown University. Incorporation of design and space workshops to top managers from all industries (banks, insurance, designers, entrepreneurs, biologists, etc.)



[MWED]
[MAM]

WORK ENVIRONMENT
DESIGN FOR CHANGE ARCH
MEDIA
BEYOND US

[M+H]



INCORPORATION
DESIGN SKILLS
MBA+HUMANITIES

IE
EXAMPLES



[Th_D]

THINK DESIGN
WORKSHOPS
REVOLUTIONIZE
YOUR SPACE

- Programs beyond us or "Architecture +": the School is preparing two new innovative programs focused on design but beyond the orthodox realm of architecture. These are: Master in Design for Change; Master in Architecture Media.

To do "more with less" means to define new ways

It seems that in terms of business models and academic profiles, the map of architecture schools is pretty limited. We are all focused on design, teaching mostly people under 30, relying on face-to-face education. It also feels like we are all sharing the same space, thinking within a very limited context, exchanging, importing and exporting ideas and experiences but almost always among us. It like we all are living in a fish tank.

But I truly believe architecture is bigger than the space we provide at architecture schools... and that there is the need -and the room- to propose new ways, new models.

Is this not the time to think out of the box and jump outside the traditional models?

In the last IAES edition (International Summit on Architecture Education) hosted by IE School of Architecture last June, where more than 20 institutions from all over the world including Harvard, Columbia, Princeton, UCLA, the Berlage Institute, Delft, École Special de Paris, Bartlett, Tokyo, Ahmadabad, etc, AA's director, Brett Steele, defined schools of architecture as "gateways more than centres" and compared them more with architecture firms rather than universities. We also had a special section for very successful alternative platforms of education: like Aedes in Berlin, the 'Why factory?' which showed that our offer is not covering the demands of the market.

The models and proposals we saw were very refreshing and they make me think that maybe this is the time to jump outside our limits... to cross the borders of our own tradition and to make architecture some bigger than what architecture schools think.

IE is certainly trying to jump.



IE FUTURE

Ava Llopis Reyna

Director, Higher Technical School of Architecture, Valencia, Spain

Presented by

Agustín Pérez-García

Academic Advisor, School of Architecture, Universitat Politècnica de València, Spain

Can we do more with less finance?

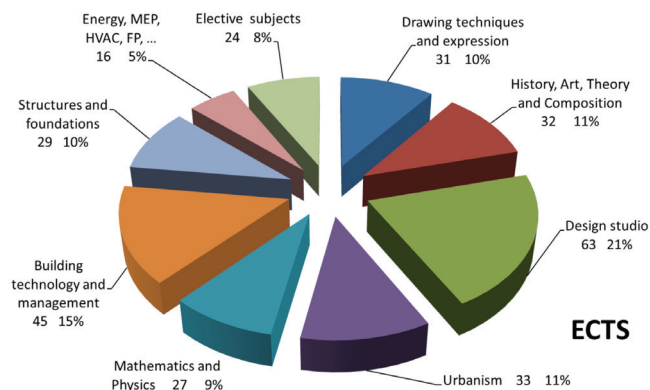
The transition from the Spanish traditional university careers based on national contexts to the wider framework of the European Higher Education Areas required some significant changes. The main reforms concentrated on the three-cycle degree structure, the quality assurance in higher education, the promotion of staff/student mobility and the reciprocal recognition of qualifications and study periods.

Since the beginning of the Bologna process we were told that the transition should be done at “zero cost”. From the point of view of the University it was understood that we were going to maintain our teaching staff and funds. Consequently the group size will decrease improving the teaching quality and the learning outcomes achievement.

Degree structure and contents

The Spanish regulations establish that all university studies will be developed on a three-cycle degree structure: Bachelor, Master and Doctorate. In the case of architecture the Bachelor degree (called Grado in Spanish) will last for 5 years (300 ECTS) plus a final project (30 ECTS more). The Master level (compulsory to register on Chambers) will take 1 year (60 ECTS). The Master degrees are intended to improve professional skills in general or to specific fields on architecture: Architectural heritage preservation, Urbanism and landscape, Sustainability in architecture, advanced building technology and City regeneration. Finally, to become a Doctor the student has to write a PhD Thesis.

This chart shows the contents scope of the Bachelor degree and the ECTS devoted to each subject in order to cover all the competences assigned to the title.



Adaptation process, quality improvements and mobility

The new degree based on the ECTS will be offered progressively. At this moment, only the first and the second year have been activated. Compared with the former study program the student has a 20% less contact hours that implies a similar reduction on tuition fees.

A new procedure on quality assurance has been introduced in order to clearly define the learning outcomes for each course based on the title competences. Simultaneously, a continuous assessment procedure tries to improve the apprenticeship results.

Traditionally, this School had a good rate of student exchanges (around 275 outgoings and more than 350 incomings per year) but very few staff exchanges. We expect that the implementation of the ECTS will improve the interaction between faculty members all around Europe.

Students

At this moment the School has 3.400 students enrolled on architecture studies equivalent to Bachelor degree. Around 700 students are on the ECTS framework and 2700 are on the former degree. Every year we accept 360 new students and the amount of graduates rises around 300.

On Master Degrees there are 160 students and a third of them are coming from abroad (mainly coming from South America and Asia). The low ratio of Master versus Bachelor students comes from two reasons: the former degree the master title was not compulsory to register on Chambers; studying architecture for five years the learning outcomes of the students fulfill sufficiently the professional competences and they have no need of further knowledge or skills.

Finally, we have around 50 applicants for Doctorate every year. It is also a low rate explained by the fact that, in general terms, in Spain a PhD does not entitle the holder for getting better professional opportunities or position. The only exception is the university career.

Human resources and teaching ratio

Our faculty has 320 members but some of them have part time contracts. The equivalent amount of full time professors is 235 and the teaching ratio is 15 students per full time professor. However, the average group size is 42 students (60 on theoretical sessions and 15 on practical issues).

Infrastructure, equipment & facilities

The building of the School of Architecture has 40.000 m² and has been fully refurbished in 2008. It represents nearly 12 m² per student and an average office size of 15 m² per person on the teaching staff. No major infrastructure needs for the coming decade except for computers and ICT equipment replacement. However, the new economic situation has imposed a 20% reduction on equipment and infrastructure at least for 2011 and 2012.

University Campus facilities (Central Library, Sports Centre, Student services, Languages Centre, ...) is shared among the schools of Architecture, Engineering (civil, building, design, industrial, chemical, agricultural), Business Administration and Computer Sciences.

Financial system

As the University provides for the expenses of the schools, we have not a completely independent budget. However, can be estimated that the global budget of the School of Architecture rises around 23.000.000 € per year. The distribution of these expenses are: 50% professors and teaching staff; 40% university services, facilities, management and administration; 3% academic activities, supplies and maintenance; 3% infrastructures and new equipment; 4% building and facilities investments and pay backs.

The incomes of the budget are mainly gathered from tuition fees (25%) and funds from the local (60%) and state (15%) government.

In general terms, our estimated teaching cost is 6.500 € per Bachelor student and year and the average amount paid for tuition fees is 1.100 € per year. Our government program of grants supports roughly a 40% of those fees and there is no policy about loans for studies.

However, due to the transition to the ECTS framework the decrease of the number of contact hours will reduce the incomes from tuition fees around 1.000.000 € on a three years period.

Research promotion and funding

On the Spanish university system, the schools have limited responsibility on research activities but promote them. It means that the research is funded separately from the school budget and is produced at Departments or Research Institutes.

Architects labor market in Spain. Past, present & future

Working as an architect in Spain is much more difficult that it was. In 2004 there was 1 architect per 1.125 people. Nowadays there are more than 50.000 registered architects and more than 30.000 architecture students. This represents 1 architect per 900 people and the scenario in five years will be of 1 architect per 750 people.

SWOT analysis of the situation

Strengths

The comprehensive learning delivered at our school improves the employability of our graduates because the technical knowledge is very appreciated in the European labor market. Proper knowledge on each aspects of architecture also increases the capability for project managing.

Our public funding system guarantees, at least until now, the accessibility of good students to good quality higher education.

Weaknesses

Our longer study period yields to a lesser student success rate and a more expensive learning process (for both the student and government).

Being the higher education funded mainly by government funds we, as a country, cannot afford the migration of our graduates to other countries. However, the present economic situation on the building industry can force the relocation of many recently graduated

Regardless of the good level of theoretical knowledge acquired by our students we still found a lack of professional and practical skills at the University.

Opportunities

We have planned to increase our presence on higher the education Spanish language market, especially on the Master level and also promoting Cooperation Programs on developing countries of that geographic area.

With the reduction of the number of contact hours we could improve the teaching/learning quality reducing the number of students per group. This would be possible only if the transition is made at above mentioned "zero cost".

We also have plans about offering more degrees related with architecture while sharing basic subjects to improve the efficiency of this new framework.

Threats

We have experienced a reduction of funds as a consequence of the global and local situation of the economy. Unfortunately, we expect that the reduction will be larger in the near future.

Additionally, fewer students will decide to be architects due to unemployment expectancy and we will receive less tuition fees as a result of the reduction on lecturing and teaching time. All these factors could yield to a lack of funds with consequences on staff redundancy, loss of teaching know-how and migration of teaching staff or graduates to other countries.

Hints for the future

To improve the future scenario of the School of Architecture at Valencia we should offer more lifelong learning programs for professionals and increase the employability of our graduates offering more specific courses.

It is crucial for us to incorporate architecture firms and building companies to the teaching process with sponsorships and professional stages.

We also have to work hard on transversal competencies developing the student's capability to work on teams and to cultivate networking.

Finally the School must promote and encourage the staff mobility and networking to achieve a more efficient knowledge exchange and to attract the interest of foreign students.

Doing more with less finance?

We can hardly do more to manage our funds even better and more efficiently.

Rita Pinto de Freitas

Professor, University of Catalonia, Faculty of Architecture, Barcelona, Spain

Spanish Architectural Education

Professional profile of Spanish architects

It is important to briefly mention the professional specificity of the profile of the Spanish architect before starting to expose the present situation of the architectural education in the School of Architecture of Barcelona (ETSAB) related to the financial cut.

Unlike other European countries, Spanish architects have a wide range of powers that include all the technical fields related to the construction: Static calculations, Installations supply, etc.

In parallel to this fact architects are also responsible for specific disciplinary areas like Town planning or Landscape Architecture.

The figure of the Civil engineer doesn't exist in Spain, and the "signature" of an architect is needed for every construction or refurbishment work and he/she can assume the liability of all the technical fields related to it.

Every council -even the smallest ones- have got among its staff the figure of the municipal architect.

This professional reality has got implicit that there is an important amount of work for architects, but we also have to consider that the ratio architects/number of inhabitants is very high; the number of registered architects is too high.

With the present crisis in the construction sector, the excess in the number of architects related to the demand of their services has enormously increased.

Spanish schools of architecture

The high number of graduate architects is a consequence of the high number of architecture schools, which has significantly increased during the last years.

There are 33 schools of architecture in Spain, including the public and the private ones. It is a too high number of Schools.

Comparing the public Schools with the private ones, nowadays we can say that the public Schools are better than the private ones.

There is still a high demand from students applying to architectural studies, and this means a very high cut off mark, and a consequential high level among the selected students.

There is also significant number of architects with relevant professional activity teaching in the public schools, what raises the education level.

Private Schools of architecture are, for the moment, a 2nd choice option for students that haven't been accepted in the public ones.

With the cuts in public funding and the current situation in the public University, this reality could change: Private schools could achieve better quality than the public ones if they can maintain the number of students and their budgets.

ETSAB (Escola Tècnica Superior A'arquitectura de Barcelona / Barcelona School of Architecture)

The ETSAB is one of the five big schools among the 33 Spanish Schools of architecture.

It has got approximately 3000 degree students, 600 PhD students and 800 post graduation students.

There is a single state model for the curriculums for all Spanish schools of architecture that leaves less autonomy on each University for the definitions of its own curriculum.

The ETSAB's new curriculum is being gradually implemented, it is integrated in the European Space for Higher and has to follow the Spanish model for architecture schools that previews a 5+1 (Bachelor + Master) model.

Finantial Situation and Teaching Quality of ETSAB

Funding

Almost all the funding (80-90%) for the public Universities proceeds from the local government and it depends only on the number of students of each Faculty.

These funds are allocated to thee costs of the degree that have to be completed with other sources like: Educational cooperation agreements, spaces rental, investment plans from the University...

The funds for research are not included in these funds, they have diverse sources and have to be found, depending on the projects, through other ways: National, local or European research projects, Councils, etc.

Loss of funds

As a consequence of the cuts in the local government funding to the University, the last revision of the budget from the School of Architecture suffered a cut from 30% - 50% related to the budget approved last December 2010. This cut included reductions between 30% and 70% in the various items and the elimination of some of them.

Further cuts are expected for the next two years.

There have also been significant cuts in teaching staff, with a cut of 30% in the number of associate professors and further cuts announced for the next two years.

In parallel to the reduction in government funding to universities, the crisis in the construction sector has led to a crisis in the profession with a huge reduction in Educational Cooperation Agreements, that where one of the main sources of income in parallel to the government funding.

Possible general impact

It's difficult to advance the general impact of the current situation, but a possible scenario considers two different aspects concerning the role of the public University and the teachers profile involved in architectural education.

The private Schools than can resist the crisis maintaining the demand of students could be able to have in relation to the public ones a better-qualified and better-paid teaching staff.

The emergence of private university academic institutions in contrast to the decline of the public one could have as consequence the Collapse of the system of "Universal right to access to University".

The other aspect is related to the fact that the current cuts in teaching staff in the public universities mainly affects the associate professors -a professional profile that combines teaching and professional activity- what means an important reduction of the presence in the schools of architects with relevant professional activity, and a loss in the connection of architectural studies with architectural practice and a loss of academic quality.

Finally the cuts in the teaching staff in general and in the figure of the associate professor in particular make difficult the incorporation of young professionals to the University.

Actions/ Initiatives/ Strategies

In front of this situation in order to avoid the loss of quality in architectural education some strategies have been planned. However some of them depend on the acceptance from the University and/or government.

A first group of actions/Initiatives aim to assure a high level in architectural education despite the loss of funds:

- Reduce number of students, without reducing number of professors.

This could be achieved through increasing and stabilize the professors' dedication to research, while at the same time part of the actual number of students could be transferred to new created degrees (Landscape, Design...).

- The reduction of optional courses that in the new curriculum are partially absorbed by specialization.

Masters could absorb part of the decrease in the number of teachers.

Regarding the Bachelor level, the decrease in the number of students would increase the level of selected students that is already very high.

Regarding the masters level, a higher dedication from teachers to research with the potentiating of the specialization masters means a raise in its quality and aims to place them as an academic reference of excellence in masters and Phds for architecture.

A second group of actions/initiatives aim to search for new funding sources and/or to reduce expenses:

- Raise the prices of Post graduations, that are the next step after the Specialization Masters: Town planning, Technology, Theory and History, etc...
- Charge fees for courses and workshop for professional training, summer workshops, etc.
- Promote the ability of the school to issue Academic certifications of quality. This experience is already been undertaken with some schools of South America.
- Reduce temporarily expenses everywhere it's possible. For example in teaching equipment or building investments.

Threats of the present situation

One of the main threats is -as mentioned before- the loss of professional profile, by loosing number of associate professors, that in our schools include on one side a group of relevant professionals that have a stable commitment to teaching, and on the other side a group of young professionals who combine teaching and professional activity to start their training as teachers.

This means on one hand an important loss of the presence in the University of Teachers with professional activity that is a determinant factor in the high level reached in the ETSAB.

Probably in future, this figure will be intended exclusively for established professionals with a short contact with education.

Another question, than more than a threat should be appointed as challenge is the ability of the school to respond to the change in the professional profile of the architect, in its professional, social and intellectual commitment.

Ideas to Share

International initiatives

The current crisis is a reflex from a deep transformation of the economical and cultural system.

In this uncertain and changing reality the possibility of sharing ideas and experiences in the frame of ESHE is of high importance.

It's necessary to define and specify with maximum precision the role of European schools in the International context.

It's necessary to render more competitive the offer of architectural education, considering mainly the North American architectural education.

It's necessary to export the European ideas, culture and experience and it's expertise in specific fields like: the urban project, the relationship between city and architecture or between object and place, the sustainability of architecture in compact contexts, etc.

In this sense we need to push forward a real harmonization of the ESHE (European Space for Higher Education), the harmonization of educational system that allows an effective exchange of students between different European Universities and the possibility for them to complete their architectural studies partially in more than one University.

At the same time it's important that different Universities can establish common international strategies and offer for example joint degrees.

The social role and potential of the architect

It's very important to be able to answer in a European context to the present change of the professional profile of the profession.

This affects both the architectural education and the projection of the social profile of the profession.

It's necessary to make society aware of the social role of the architect. The life of an important part of the world population is mainly linked and partially determined by the space built and defined by man and the quality of this spaces and lives is on one hand a duty of city councils and politicians and a at the same time citizen's right.

A work in this direction can increase the social consciousness of the role of architecture serving society and the recognition of the specificity of our profession. This can at the same time increase its social and economic value, and generate a stronger need for research in architecture.

In parallel to this, it's necessary to enhance the completeness, richness and value of the architectural education that enables the architect to assume a wide range of social responsibilities not necessarily linked to it's professional exercise as architect.

Debate

Per Olaf Fjeld, Norway

It has been a very interesting morning. I found the morning very challenging in the way that when we were talking about cuts of 40% or 50%, are we then talking about another type of school? Is this what it really means? Or does it mean that we have to cut where we can? Can we take on the traditional programme that we have followed before? In other words, are we then talking about another kind of infrastructure within the schools themselves? What is the awareness in relation to the strategies that these schools have? Certainly, one would think that it is not the same thing that is produced. It would be interesting to listen to different comments. One is also talking about a different type of communication between schools and how to pursue that fruitfully in the way that we can get the best energy out of everything.

Spyros Raftopoulos, Greece

I don't know if it was on purpose or whether it was coincidental, but the speakers and presentations were from the south of Europe, or should I say the poor south! In which case, there are a couple of countries missing, namely Ireland and Greece. Obviously, I don't know what the situation is in Ireland, I hope that other people may present us with the situation there, but I am able to say a few words about what is happening right now in Greece. There, we find very much the same situation as the one presented in other countries that were mentioned. A similar situation applies in Greece, too, which is that there are budget cuts in universities, especially in our Technical University of Athens, which last year was about 40%. As my colleague is whispering to me, it is the same in Thessaloniki. Similar sorts of cuts, up to 25%, have been cut from the salaries of the academic staff. On the other hand, from what we have heard from other schools, the number of students has not been reduced and the requirements have not been reduced. In our school, for example, because of lack of finances and the situation as it has been for the past year or so, the number of teachers in our school, from approximately 100 - 110 previously, has been cut to seventy. This is a reduction of approximately 40%. So while student numbers have not fallen, we find there is no replacement of academic staff. This means that for the past year and for the next year or so, as we suspect, there will no replacement. The size of our school regarding the number of students is approximately two thousand, so they can make a calculation and see what is needed and assess the ratio of teachers to students. We have an additional problem which has applied since last Wednesday. The government has passed a new law regarding the organisation and academic situation of all universities, one which goes against the wishes and the beliefs of the academics and of course the students, too. This means we are going through a very difficult additional crisis; the University of Athens and in fact all the universities in Greece are in turmoil, meaning that a great number of universities are not operating. They have been closed down: students are occupying the universities. The same is happening in the School of Architecture, the University of Crete and our University of Athens as well as in other universities. We know approximately what sort of changes are being applied to the organisation of universities and the academic curricula; on the other hand, we do not know how these things are going to be applied. So really we are in the same situation as the

south; we are also going to hear the experiences of the north and see what developments we are going to face in the near future.

Constantin Spirionidis, Greece

I would just like to give some idea regarding the selection of the people on the panel. Of course it was not random. I would like to present the strategy which was behind the choice. This year, we were thinking that it would be interesting to have people that were coming to the event for the first time, in order to have a renewed panel made up of people who were here for the first time. In the first session, which concerned finances, of course we asked for the south of Europe to be more strongly represented than the north. I would like to say that we also invited a Nordic country, just to provide an equilibrium, but unfortunately this participation was cancelled, not from being unable to be with us, but because he asked, quite reasonably, since last year we had doubled the budget, what could I contribute to this discussion? Also, we invited a Greek colleague, but unfortunately, at the last moment, he asked us to cancel his participation because of the conditions that Spyros Raftopoulos has just described. He was obliged to be at the school because of general assemblies and administration meetings. After that, there only remained the south, but as you will see in the next sessions, there are people from other countries too, since the theme is more or less the same. So there will be an opportunity to hear opinions from other areas as well. If that last comment was a criticism, any criticism is welcomed!

Per Olaf Fjeld, Norway

I think these comments are very useful because they just state that architectural education is within a state of movement. We need to ask: what is the direction of architecture in general? It is a big question that we cannot solve today, but we should debate its nature.

Pierre von Meiss, Switzerland

Firstly, I would like to ask if you can give some additional information about the new law you mentioned. In order to stop teaching, or to start occupying the university, it has to be a very serious issue, so it would be nice to have some short details about this law.

My second question is addressed to the panel. All these politicians who decide on such matters, most of them have been to university. They know how universities function, and it seems strange that they cannot see the problem and that they do not do anything about it. There are these huge numbers of students - let's say, maybe uselessly huge numbers - and perhaps there will not be a job for all of those people. Budget reductions mean that you cannot really operate honestly so you have to undertake anything in order to convince the politicians that they have to reduce the admission quota of students entering the university. That is the only result I can see.

Spyros Raftopoulos, Greece

I'll try and be brief because it's a very long story. First of all, I would like to say a few things about the situation that existed before 1st September, which was that the academic curriculum was

organised on a continuous five-year programme. Everything in terms of the university was, and still is, controlled by the state. This means that the students admitted to the university are very strong candidates. There is a very difficult examination entry system, which is controlled by the state. We have no say as to how many students we can accept each year. In terms of administration, the organisation of the universities was first of all elected. The rectors or even the heads of the schools were elected by the academic staff plus the 40% of students that could vote in the election of academic staff. That was the system that existed until 31st August. There have since been changes. In addition to the fact that it is all publicly funded, which means that students did not pay any fees; they received all text books free of charge. Let me move onto the changes. You can see these for yourself from the law which is being published this week. It seems that there is a change in terms of the academic curriculum. It is going to be applied in a three plus two; it is not very clear as to how it is going to be organised. There is a suspicion - it is going to appear in the near future - that the three years are going to be free of charge, which means that this will be publicly funded, and for the two years, there might be a requirement whereby students have to pay fees. This is one of the reasons for the students' reaction in terms of the payment, especially this period of financial crisis, particularly for the big families. In terms of the academic staff, there is a change in the way the academics will be elected. There was an academic body, in the Schools of Architecture, for example, that was for all the Schools of Architecture in Greece, and in the same school that the prospective person might work. This is now changing, which means that only a few of the people from the same school, three apparently, are going to be on the selection board, and the rest are going to be from other schools and it will be compulsory that at least one person should be from an international school, from a European school, or from another country. In terms of the administration, the heads are being abolished. There will no more heads of schools as there used to be who used to have the administrative and educational or academic responsibilities. They will only have academic responsibility. There is going to be a Board of Directors consisting of eight academics of the university and six people that are going to be from society, as it is being called, which means that they will be non-academics. They are going to have a president, who will be part of this Board of Directors and the Board is going to have the powers to administrate the university. There is going to be a rector who is going to be voted for by the academics; he should be from another school or from another university, he should not be part of the same university. Another very important point is that - in terms of public opinion - we used to have what was called asylum, which meant that the public authorities could not enter the universities unless they had permission from the academic authorities. This is changing, which is another reason for the students' reaction, because they feel that the public authorities will interfere with the freedom of academic opinion.

Maria Voyatzaki, Greece

I would just like to add that in contemporary Greek politics, it is the first time in a long time, in 150 odd years, that all MPs voted for this law. Socialists and right-wing politicians came together to vote for this law, which is an interesting point to note. The other factor is that you have to look at the Greek mentality and put the reactions in context. We had a very strong left-wing leaning after the dictatorship that Greece went through. This means that the students who are occupying schools at the moment and the professors that attach themselves to the movement or wind the students up are, to put it simply, extreme left-wing, in my opinion. They

make up only 5% of the Greek population in the universities but they are very strong and quite dismissive of many things that are good about the law. One of them, as far as I am concerned, is to drop nepotism because this has been going on for a long time in Greece. I think we have to be very critical in many ways, both in a positive and a negative sense and try not to throw the baby out with the bath water.

Pierre von Meiss, Switzerland

Why not reduce the number of students? This is as the Greeks do already; they have a control over the number of architecture students they are going to train, whereas in Rome there may be 14,000 or in Florence another 3 or 4,000, which has no relation with the population. Why not do this rather than just cut back 50% without changing anything else?

Ava Llopis Reyna, Spain

I think we could reduce the admission of students; we have planned to do it. It seems, however, that it is not a very good idea for the local government, because they do not want to do it. Therefore, we have to fight, saying you can change from 360 to more than 300. It could be this, but nobody wants less. It is possible with the same staff to cope with fewer students. This would improve the quality of the teaching, you will then need extra people, but the question is how many people are working at this moment in university, will have to leave the university because there are no funds. Those are two separate things. We can do the one, but the other one not so much, because as I mentioned, our funding is mainly from the government; just 15% of our budget comes from tuition fees. This is not very much. The university will lose very much, but quality increases that way.

Rita Pinto de Freitas, Spain

As I mentioned before, we are trying to reduce the number of students. This is the main strategy and we think it will be very good for the school and also for society. This massive number of students is a consequence of the decision taken thirty years ago to open the university to democratize it. It was good at the beginning, but it also had negative consequences, because the intermediate study and more professionally directed studies have been left behind. In one sense, it is a good decision. It is hard, which is why we try to keep the professors, not to have to send them away. Nowadays, for every ten professors who retire, we replace them with five new ones. That is another way of reducing the number of staff. But as was said before, this is a question of budget and of finances; the problem is a political one. It has a political dimension: what is the role of university in society? In the case of Spain in particular, architecture could be a strategic core, because it is one of our most well-known forms of education abroad. Moreover, the role of education also has the social dimension of architecture and of education. Here is the fight: how can politicians not give money to universities? I think it is not a very representative moment because there is a desperate reaction and it cuts money all over. Yet what will happen after one or two years? Because there is always this shotgun reaction of politicians. I don't mean to start a political discourse, but this happens in every country. I believe that in Europe there is the fashion - it is present in Spain too - not to invest in education. But what can we do as professors at university? Surely we have to press on and make society aware of this.

Saverio Mecca, Italy

As I said before, tuition fees are not so important for our budget, so it is not a financial problem to reduce the number of students. We can afford it. It is a political problem. A lot of the older students and a large number of the teachers, as well as society, are asking the university to host more of our students. We have a pressure index, Rome is about four, Florence about three. Every year, we take one student out of the three applying to do architectural studies, so it is not easy to reduce this number. The idea is to define and match the appropriate number of students to the number of professors. We do not have such a problem concerning the physical resources and infrastructure, buildings, because we have planned it for a larger university, so we shall solve the problem of the buildings and we can reuse them. I think we will do this. Next year, we will cut the number of students for architecture from 450 to 300; we may use this next year and by the end we will have 250 new students each year for architectural studies. For industrial design, we may continue with this level because there is a great deal of pressure. Every year, five or six builders are asked from industrial design and only one is accepted. We cannot lose this one. Regarding the others, we are going to plan wider cooperation with other schools of architecture in Italy or abroad in order to assure a larger number of students in regional and city planning or landscape design. We are going to manage but we know that it is more of a political problem so we know there are political criteria as well as financial criteria to be taken into account.

Karl Otto Ellefsen, Norway

This is really something else which I don't really want to go into in any political sense because the discussion is about the reduction of public spending. However, since one representative of a private school made a presentation, I just wanted to ask the panel if they consider private schools as being some kind of alternative in the future, not only seen from your side, but seen from a political point of view, that of putting architectural education into the private sector. Could this be an alternative? Will we consider it, because we obviously know that in parts of the world this is already happening?

Francisco Javier Quintana de Uña, Spain

I think it is an interesting question because some of our colleagues here talked about raising fees, reducing the number of students. There might be a part of the solution which comes to that. From my point of view, and going back to the first question, I think that is the reason for being for the schools of architecture. I think we then get into a very dangerous cycle whereby we reduce the number of students to keep the teachers' jobs, but the reason for the jobs of the teachers is the students. This is not a public policy, this is just a very logical way of thinking, from my point of view. I think the question is the difference between private and public. Public money is coming from above, private money is coming from below, from students in this case, and in the middle there are many opportunities to get funding. I also think opportunities are available for both public institutions and private ones. I think that both in the private and the public institutions there is an additional role to the teaching staff, which is bringing in opportunities for funding, whether from companies, or institutions, or other partners. This is what I feel is happening in other schools, in public ones; I could give you examples of where this is

happening in Madrid and in Barcelona. The people who are going through budget cuts bring in private money that comes in agreement with local public administration. I would strongly encourage people to think about the meaning of the idea that we are getting a budget cut so we have to cut ourselves, then we have to cut the number of students. This is a very big vicious cycle. From a very broad point of view, I believe the students must be given the right to continue.

Manuel Jorge Rodrigues Da Costa, Portugal

This is about the reduction of the number of students so this is where there are many contradictions. I think that on the one hand, the government is urging us to have more places for students, through offering evening courses, for instance. At the same time, they are looking at some criteria to define the role that universities have; one of them is employment. We may form many, many people and afterwards, possibly those people will not have any employment. We have also to consider the fact that there are too many architects, so I think we will come to a point where we have to reduce the number of architectural students in our schools and even the number of schools. There is also the question of the fusion of these schools. If those schools were fused, then I think there would be some kind of globalisation and the loss of a certain identity, of the roots of a certain school. At my school we are deeply rooted in the beaux arts; we are looking forward from the old school, and if we came together with other schools, I am sure this would be lost. As for the issue of the private schools, I think that in the future the schools will be open to the possibility of being even more specific than the old schools, of being more specialised. I think that is the future.

Renato Masiani, Italy

In Rome, the large number of students is something to be looked at from two points of view. The first is that we have too many students. The second regards Italian law which imposes a standard ratio between professor and students. This is a new law, which will create something of a problem, not concerning the faculty or architecture, but concerning society. It creates a big social problem. Next week, we will have this test in my faculty. We will close the door to 2,000 students. What will they do in the future?

Manuel Delanda, USA

So far we have concentrated on one aspect of the economic crisis, the aspect that relates to financial institutions and sovereign debt, but at least in some other countries that are undergoing a crisis right now, the United States obviously, but also Spain, Ireland, the crisis must be preceded by a construction, a boom, or a real stage speculative ball, which eventually burst, similar to what happened in Japan at the end of the eighties which they still cannot come out of. Of course, that affects architects in another way, because there was a construction boom and there was an over-production of stock. All of a sudden, automatically, there is less demand for future construction, less demand for future architects and this is a secondary problem to the one of funds and government funding of schools. I would like to see what the opinion of the panel is on this aspect of the problem.

Ava Llopis Reyna, Spain

Is it worthwhile for the Spanish system to pay for the studies of young architects, there being four times more interest rate for our sovereign debt than in Germany at the moment. I do not know what will happen in two months. Perhaps we will send those architects to work in Germany, probably not as full architects but to work as part of a team. I think that the answer for me is that we do not need so many students of architecture because we cannot give them the opportunity to work as architects. In that case, the best thing to do is not to create speculation on something which is not clear. In the end, it is more expensive for the government and there is no return on it. For me, it is completely the answer. The other question is, how much does culture cost? How much does health cost? How much does democracy cost? Can we afford to pay for our parliaments? Can we afford to pay for many other things such as hospitals? We should do so; we have been doing so up till now, so can we not now? Where is the wealth? Has it vanished? Was it there? Many things have changed. Some bodies have more and many more have less. In this case, we have to think about the social dimension. I would say that we do not actually need for our country more professionals in architecture which we cannot afford and we should not give less money to universities or culture, to a greater culture.

Manuel Jorge Rodrigues Da Costa, Portugal

Of course the unemployment and the reduced number of students is not only because of the present attitude of governments towards universities. If there is no work in building, there is not such a need for architects and so of course we do not need so many students. The majority of our students that finished last year or the year before are not working in architecture; sometimes they are working in less interesting fields related to architecture, so we must quickly change these things. The problem is not only for the new ones, many of my colleagues that used to have practices are closing them down; they are returning to school only for teaching as a way of surviving. The work available needs fewer students.

Murray Fraser, United Kingdom

When I first came here two or three years ago, we were discussing harmonisation and the fact we had to move to the common formula of the Bologna Agreement. I have come again and now we are having a very different discussion. The question for me is that we seem to be moving from a situation where there is going to be ever more conflicting and diverse models of funding for architectural education across Europe. How can harmonisation be sustained? Has in fact harmonisation gone and will it become a fragmented situation? Also, as we are looking at this type of debate, between a public university or a private university, in Britain things are even worse. With our stupid American-derived neo-liberal policies, we are producing things which are something like halfway, whereby a very small part of the public universities are becoming largely private universities with essentially the myth that somehow the consumer should pay for getting an education. I think the problem we have is an issue for everybody and this is the whole notion of social inclusion. That to me is the real worry: is what is happening in the British education system happening in the system in general? Where do we see architecture fitting into society? What sort of students should we have? What is our role? We are getting lost with getting dragged into this, I think this is a potentially worrying situation which needs to be discussed.

Per Olaf Fjeld, Norway

Not everyone is always in agreement with the views! But it needs discussing.

Francisco Javier Quintana de Uña, Spain

I just wanted to mention very briefly the comments on funding, one from the United States and the other from London. Regarding harmonisation, it is true that two years ago, we were talking here about the effect of Bologna and what it would mean and then we spoke about the bubble. In Spain, we had for almost twenty years a dream time for architects and engineers in areas such as construction work. It was a very important part of the economy of the country and it had an impact on the schools of architecture. Now it is no longer in Spain any more and I have to agree with my colleague from Valencia because we have the Bologna situation. I think that our students are very highly qualified and they were the ones doing a great job - not always, we are talking about coping with the bubble absorbing a great amount of work and just needed their suitcases and had to go somewhere else. This is why professionals are going all over the world, and I can see a negative side. To me, it is negative when professionals have to move somewhere else. Architecture is not a contextual business any more. Schools do not have to answer only to the contextual demand; we are very modest in Spain. Most of our schools and our students are international, this is our goal. It is a global situation with, of course, a lot of local sensitivity to it, but I do believe Spanish experienced architects with their high tuition and qualifications will not just transform Spain but transform other countries too.

Per Olaf Fjeld, Spain

A strong statement there! That might form another debate.

Rita Pinto de Freitas, Spain

I also believe in this strength in Spanish architectural education. However, let me go back to the previous questions and try and connect them both. I would first say that our option for best reducing the number of students is not a question of budget but a question of need within society. I do not want to say the market, it does not need so many architects and schools will be better if there are fewer architects than nowadays; that is the main reason, not only financial. Concerning the question of the construction boom and over-production and the loss of architectural jobs nowadays, this is the situation now. We have gone from over-production to under-production. This is the present situation; it will not necessarily be the future situation so we cannot act simply according to the present moment. It is not always going to be like this; in fact we are living more in urban areas, cities are growing and an increasing number of people now live in cities. If all these urban spaces are not planned or designed by architects, then they should be. In this sense, I think the social responsibility of the architect is increasing and not decreasing. Therefore, we should prepare for this. The job of the architect is most probably changing, and the model like the small office has to disappear or at least be reduced. However, the architect as a public professional, a social professional, is a profession which has many more responsibilities than simply just to design houses or buildings; an architect in theory is in a big way open and we should not only react to the present. I think private and

public can live together. The public is our responsibility. The political responsibility of each state should, in my opinion, never be left solely in private hands.

Ava Llopis Reyna, Spain

Just a question: could you imagine what would happen to the number of students in architecture if all the schools were private? Would they have more students than those who could pay the fees? No. So, in that case, could the public system support much more than is needed for this society? I do not think so. We have to ask what we need, what we offer, whether we are failing or succeeding in these studies. I believe in public education, I believe that good students can and should go to study what they want but I also believe that the country has to measure what it needs and adjust the budget to what that amounts to.

Stefan Maeder, Switzerland

I have a question I would like to put to Rita Pinto de Freitas. Thank you for your speech. You mention how important harmonisation of the field education in the whole of Europe is. I think we have enough harmonisation and I am very happy to be here in contact with all schools. I know the Spanish system quite well, I know the system in Albania because I have friends there and I go back and I try to do the best for the students. But why do we want more harmonisation?

Rita Pinto de Freitas, Spain

I probably want more harmonisation because of the situation in Spain. As I said in my presentation, we have now decided to have a Bachelor of five years and a Master's of one year. This is a big difference from other universities and it makes it extremely difficult for us to receive students from other countries to study for the Master's. It is true that in Spain the attributions of an architect are wider than in the rest of Europe but it makes it difficult for us to study partially in another country and the opposite too. This is one of the main reasons. The other reason is that the harmonisation that exists, or rather, semi-exists is more a curriculum harmonisation but not a strategic or cultural one. I feel that this type of harmonisation is absolutely crucial in order to be able to protect European architectural culture in other continents. It is a question of form and a question of content. I feel that in this sense there is more work to do.

George Papakostas, Greece

I would like to remind you about the same situation we faced last year, we said for instance that there are too many architects for work in Europe. We asked: what shall we do with those architects? We also asked if there was a need to shut down schools or to merge and fuse departments and perhaps to reduce the number of students. The answer last year was that in Europe, there is a specialised and high quality of production of architects and these architects are sentenced to the globalised production and management of space. This means that this raises a new question about the quality of those students to deal with the difference in other areas of different productions and societies globally. This means different societies, different economies, different cultures and so on. Students of architecture and architects have to deal with the production of space in China, or Latin America or wherever. It is the case today that

in Spain there is one architect per 750 inhabitants. Does this mean that you have shut down all the schools of architecture in Spain? Does it mean that the policy to produce architects is national? Is it European? Is it European and American? Is it European, American and Japanese? If is Japanese, for this example, can we think it will become a little more globalised in order to face those new situations and therefore bring new answers about the culture, about the quality, about the other characteristics of the new profession and of the new architects? That is the point, to my mind. I also have a feeling that the answer may firstly be political and then educational.

Ava Llopis Reyna, Spain

I do agree that it is an awkward situation. This has been the scenario for five years but at this moment there are 900 inhabitants for each architect, which is obviously too many. We can choose between producing more graduates at our own risk and cost and sending them abroad or trying to reduce our production and keeping it at a normal or good level. I think the second of these options is the best, because we are increasing and increasing our debt as we are already paying for this teaching. In my opinion, we have to cut the number of students. I do not agree that we will have to close all the schools - evidently not! - but we do have to put some kind of maximum on the number of students coming into schools.

Per Olaf Fjeld, Norway

I would like to introduce a question which relates to many of the thoughts that have been voiced. Are we talking about a new definition of an architect? If so, what is that definition? I would like to continue to talk a little about that idea in relation to this perspective. You also said it is not a contextual discipline any more, which one may or may not agree with. You also state that it is not a particular type of discipline, that is only related to the idea of space and we can continue to look at that.

Francisco Javier Quintana de Uña, Spain

I usually do not like to predict the future, but I think that the role of the architect that we have enjoyed, practised and supported in the last decades has to be reviewed. Some things may fall by the wayside. I think it is obvious that geographical issues is one of them. If not why would we all consume the Bologna agreement, because there are some schools trying to accredit themselves, with South America, trying to make education more flexible and available; they have made a huge effort, so that is one part. I think professionals as well as the students are more used to understanding not only their local problems but also the global ones. I think of the expression which was very much used in the United States: "globals" - so I do believe this. We can function locally as well as globally. That is one condition. The other one is that I agree that the architect is a bit more than what it is now. In my school I like to talk about the octopus concept; I think we will train our graduates to do many more things than just the traditional understanding of the architect. We are able to jump into other fields and still be competitive. I think that most architectural practices are in some ways invading other fields quite successfully. I think that is part of the momentum of the profession. Not that many other professionals have that capacity to relate to the design world, or to the media world, or

to the financial world in the way that we as architects do. Architecture is design; it is fuelled by business otherwise nothing would be built. Those are some hints, but I really do not know what the future will bring. Each culture will develop their own style of architect, but as I said, I see us all swimming round in a fish tank where we all have the same understanding of the profession and I think there is a demand for different understandings by the teenagers. They are not asking just to be architects; they are asking to be this or that, they are asking for their own definitions and the new definitions are more blurred, more mixed in their vision of the future and their professional capacities.

Constantin Spirionidis, Greece

I would like to continue Murray's line thought about the impact of architecture on society. We are experiencing this situation and from the discussions that appeared in the panel, it seems to be something that we will be confronting for the next few years. None of us believes that this situation will change very quickly and then after a period of time everything will be as it was. We therefore have to develop strategies. We heard different ideas about the way that we might deal with this current situation. I think there is another direction we could take, which is probably a long-term strategy, which is to try to make clear to society how architecture is useful for society. We have never undertaken such a project as institutions in Europe. There are countries where someone can build without architects, there are countries where civil engineers can build and architects are not present in the construction and I am not sure whether society as such knows the real usefulness of architecture and an architect. There is no kind of project and the schools always remain introverted, speaking about the number of students, the number of staff members, the profiles of the graduates, but it is a discussion which remains amongst us. If we want to gain a place in the future, in this difficult situation, in the procedure of the financing part of society, then we have to raise our profile in people's consciousness in order to have better chances in the difficult situation in which we find ourselves. That is why I believe we have to undertake the project collectively: the schools and the associations as well as the professional associations, both on a local and on an international level. It is something which has been neglected up until now but probably the crisis will raise this level of action as much as possible and that will be one of the advantages of the crisis. The second issue that is emerging is that once again, the question of quality is raised. We always think about quality, but we never define it. Each school advertises quality as its main objective, but if someone wants to go through the details, there is something of an obscurity about the way that this quality is defined. Or, at least, there are completely different ways of defining it. Thus I strongly believe that this is an issue that we have to address again collectively. This may make it possible to create - not to produce, but to create - architects who will have a greater impact on our society. I do not know what is happening in other schools, but in my estimation there is a minority percentage of good architects - a maximum number of 20% - who graduate from schools. The other 80% who graduate are not of the quality that someone would expect. They are perhaps not able to prove their meaning and their usefulness to society and to demonstrate the true significance of architecture to society. This is of course something which will not help the previous idea of a project that someone has to do. I therefore feel that in the near future we have to open in a very systematic way what we need when we speak about worth and value in architectural education.

Selma Harrington, ACE

I am a practising architect in Ireland. I am also a part-time lecturer at a private college and President of the Architects' Council of Europe. It is the first time that I have been at this meeting and I am delighted to be here, even though I know that your organisation has a long-standing cooperation and association with the Architects' Council of Europe. I am glad that Constantin Spiridonidis has finally volunteered to intervene. I am glad that he has addressed the points of strategic thinking, the value of the network and ways forward, which may not have been fully addressed before. I have learned quite a bit this morning and I hope to participate more fully when I give my presentation tomorrow. This might address some of the aspects of professional qualifications and how the Architects' Council of Europe sees them as a unified European group. This is something I will talk about tomorrow. However, what I did want to reflect on is some of the comments that I have heard from people saying, "Well, I don't want to make this political, but —" I think the proceeds of this group and of the few days that you convene should be political. That would be the only single value added purpose for me to see coming out of this work: that you do make a very strong political statement. Universities and educators are in a very strong position to do so. Most of you are publicly funded, you have interaction with political representatives who need challenging in some way. You should use this. You should also use the partnerships with professional organisations or maybe use the method; this is something that I wanted to mention here. What I see as the value of you meeting would be probably providing even better statistical information; maybe you do that and I apologise for mentioning it if you do but I wanted to hear even if you know how many graduates across Europe do you have say in 2010? What are these numbers that you are talking about? I have heard that the Spanish university professors earn €20,000 Euros per annum, which is not a lot. If you go back to the website of the Architects' Council of Europe, it produces a sector study every two years. The data that we have been given says that the average architect across Europe earns €30,000. We can see straightaway even from that kind of snapshot that we are not in the kind of lucrative position. Our profession is lower paid than a lot of professions. Numbers matter. They are linked to economic and political issues. So your reduction in the number of students and maybe preservation of academic staff and so on has to be seen in a broader political context. To address the problems, to advance the cause, you have to be equipped with the information. I think that would be best viewed on the network. I will end on that and I hope to contribute further.

Marvin Malecha, USA

The American model was cited only once during this presentation and it was in a derogatory way, but I think it is fair to say that if the public university is privatising. I think that is a fair statement. You look at most of the major public universities and an increasingly smaller percentage of its funding is coming from state sources. At my university, for example, that percentage is dropping and I heard recently that some of the bigger universities only receive only about 10-20% of their funds through the state for the total operation. So there is a massive move towards privatisation and I might also say towards freedom in the process. What I would also say is that a couple of things come to mind here. One is the title of this session that I find difficult. This is because it is about doing. I do a lot of development work looking for private money to sustain what we do in college. There was one developer that I meet with

who was saying that the old model has gone and we are operating with a new model and I am still profitable in the new model even when all of the old funding models have gone. The old model has gone. That is the first thing I would say. You might be in the early stages of it being gone, you might be further down the road, depending on which country you are from, but the model has gone. The sooner you accept that, the more likely you are to be successful in that process. The real question then is: how do you want to do this? Having been President of the American Institute of Architects, and President of the Association of Collegiate Schools of Architecture, one of the things that has struck me in my moving around the world for the EAAE is that if you compare what an architect does today to sustain their offices versus what they were doing in 2008, then you see that 40% of the work they are doing now, they were not doing in 2008. That should give us as educators an amazing lesson about the way that architects are profiling themselves and how we should be educating the architects. Holding to the traditional notion of what an architect is, to what an architect does is the death of the whole concept here. What is exciting regards the redefinition of the architect, the larger role in society for the architect, the whole concept of reinventing what it is the architect does, given the new technologies and given the new roles and so on. Thus the real question is: what is the dream, what is the narrative? Once you have the narrative of what your schools should become, then you will know what to throw and what to let loose. In my College we have started two very successful private enterprises that have nothing to do with state funding. About a million and a half dollars a year to sustain our Prague institute is entirely privately funded with no state help at all. It costs another million or million and a half dollars a year is the temporary art foundation Museum in the centre of Raleigh which is entirely dedicated to kindergarden though high school education, which is also entirely self-supporting. Those are important to us. The third effort that we are just starting in my college is incubating new design practises: we will actually be involved in helping invent new practices and in incubating them. This is also important to us. What I am saying is that doing more is less is doing and what is it that you want to do? What is your story? Your story is really your country, your place, your culture, how it relates to the future. I think this is what is missing a lot of the time; we worry about this because all of these strategies, whether to cut more students or to attract more students. I would tell you that I want to see more architects in society because they might become the bankers and the lawyers I do not want to see fewer architects. I do not think that is a good strategy at all for us to follow. My passion for this session is: dream, and then decide. I was telling James Horan the dream is to fly and just stay flying. Whatever suitcases you throw overboard from the plane is not important as long as you keep flying.

Sebnem Hoskara, Eastern Mediterranean University

I think it might be the ticket for all of us to hear that. It does not matter from which country, from which region of the world or of Europe we are from, we are having similar problems. If we know this, the fact that we are all in the same boat regarding cuts in finance and budget in our own schools, then this is something worth discussing now. But the important thing is that we should be able to expand this to our faculty, to our members. What happens when there is a cut in the budget? It does not matter whether it is a public or private cut, somehow the money coming to our pockets for architectural education is less. How does this affect us? Is it a cut in our salaries? Is it a cut in research funding? Does it affect the mobility of the students? Does it affect the academic staff? But still, with all these conditions, we should still be giving good

quality - whatever the definition of "quality" is - architectural education to our students. This is the common mission for all of us. We might be defining our uniqueness in our institutions; we might concentrate on different definitions of the "architect" in the end but I believe the value of becoming an architect is to have a much larger vision of the world and of life than any other profession. Therefore, giving architectural education is very different from any other university or professional education. It is important to remember that in the middle of all this financial crisis that we are all facing in whatever way, the important thing is the quality of the education that we are trying to give and the graduates that we are producing. It is necessary to think about what sort of professionals they are going to become, what will they be doing in the future, in their own countries, in Europe or anywhere in the world. This is what matters. I believe that this is a relief to know that we are all facing similar problems but the important thing is to think about what we would like to see in the future when the students that we have now graduate. This should be the crucial question that I think in the coming sessions -regarding resources or teaching - we will be discussing in a deeper sense.

Session 2

Doing more with less human resources

The crisis is affecting the human capital of our schools. The recruitment of new staff members becomes increasingly difficult and the retirement of the existing staff does not have an immediate replacement, not always without purpose. The downsizing of the human capital of the schools has a direct impact of the staff /student ratio, as the number of students, in most cases, cannot be reduced since it affects directly public funding. Staff reduction affects its mobility, its academic development and updating, its overall performance and its research contribution.

How can schools protect and enhance the quality of their education under these conditions?

To what extent can these problems be solved using different management techniques, different teaching schemes, or different curricula structures?

Are there any experiences to be shared?

Are there any ideas to be exchanged?

To what extent can a profession-vocation such as that of architecture educators shift from its need for reflection time, lifelong learning and research into a time-consuming, labor-like activity in the class?

If the quality of the education we are offering is also depended upon the human resources available, to what extent can our ethics tolerate this decline?



Chair:

Stefano Musso, Genoa, Italy

Introductory panel:

Martin Chenot, Saint-Etienne, France

Catharina Dyrssen, Gothenburg, Sweden

Susanne Komossa, Delft, Netherlands

Lars Henrik Stahl, Lund, Sweden

Martha Thorne, Madrid, Spain

Johan Verbeke, Brussels, Belgium

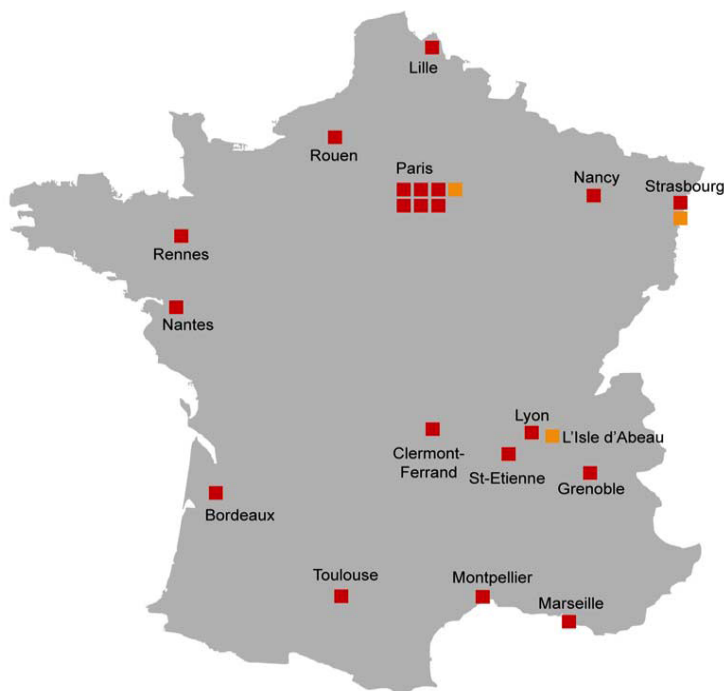
Introductory Panel

Martin Chenot

Architect, Director of l'Ecole Nationale Supérieure d'Architecture de Saint-Etienne, France

The French situation

The architect diploma is delivered in France mainly by public schools, and under the control of the Ministry of Culture and Communication, in the LMD cursus since 2005. There are 20 public schools (called ENSA, écoles nationales supérieures d'architecture), and 2 others with particular status. The 20 ENSA globalize 18.000 students, 1000 permanent teachers and 700 administrative staff. Most of the teachers and staff are civil servants. Fewer than 2000 new architects graduate from these schools each year.



Le réseau des écoles nationales supérieures d'architecture et de paysage

The 20 directors of the ENSA, wrote a report in 2007 to present the situation of architectural teaching and research in France. The “Plan pour l’enseignement et la recherche en architecture” alerts about 3 main points:

A possible lack of architects in the future

With 45 architects per 100.000 inhabitants, France is well below the European average of 87 architects/100.000 inhabitants. The global number of architects is decreasing, because the number of new architects out of schools is less than the number of architects going for retirement, due to the demographic effect of post war baby boom. If France the number of students doesn’t increase, there will be a lack of architects in the next years.

A lack of social consideration about architects and schools of architecture

Architects in France are perceived as an artisanal and disturbing profession. To understand what this means for schools, you just have to compare the price of studies with other professions. For the 20 ENSA, the average cost for the State is 8.000 €/student/year (the State covers 90% of the ENSA budget). This is much less than the cost for engineering or management students (around 14.000€/student/year) and even less than university students (10.000 €). The independent French agency for evaluation confirmed this poorness compared to other disciplines.

A lack of structural policies to develop research in architecture

Because of their history as professional schools, the ENSA have real handicaps to develop research. Compared to university where teachers are paid for research activity as for teaching, in ENSA, a teacher’s contract is only based on teaching. So legally there is no researcher in architecture in France. At the same time, even if architecture is one of the main domains to take care of sustainability, there are only few national research programs on architecture, urbanism and landscape design. Hopefully, ENSA have developed research since more than 40 years but they really need structural changes to improve their scientific activity.

That’s why the 20 directors of ENSA try to forwarn about the necessity to preserve schools of architecture during the crisis and to prepare for the future. If actually the global budget of the Ministry of Culture is protected, ENSA have to face a staff members decreasing. Each school is trying at the same time to mutualise, to outsource and to find other resources. But most of all, the ENSA network is trying to find projects able to make the demonstration that architecture can be an answer to the crisis, to social demands, to the global evolution. One of the most important projects we hold together is “Les Grands Ateliers de l’Isle d’Abeau”, a technological platform for pedagogy and research, connected with other disciplines, with private building companies and public administration of territories.



Exercice pédagogique

Projet Gaudi Amata Zdiobeck



Les Grands Ateliers de l'Isle d'Abeau, lieu d'expérimentation pédagogique à l'échelle 1
« Les Grands Ateliers de l'Isle d'Abeau », platform for research and pedagogic innovations at scale 1

Catharina Dyrssen

Head, Chalmers University, School of Architecture, Gothenburg, Sweden

Vitamine Injection for Swedish Architectural Research

When the Swedish Research Council Formas granted 9 million Euro to the four main schools of architecture in Sweden for architectural research, it was the largest venture for decades and a great challenge to bring the field forward in the national and international research communities. Here, the process of the venture is described and four main questions are raised: How can you collaborate to gain strength in a small research field? How can we systematically move forward to make architectural research recognized in the wider research community? In what ways may this contribute to the European architectural collaboration at times when economy is low? And, how does this contribute to changes in architectural education?

Background and process

Formas was established in 2001, with the mission to promote excellence in research for sustainable development within the areas of Environment, Agricultural Sciences and Spatial Planning. In 2005, Formas conducted a large evaluation of architectural research, in which it was recognized that architecture constituted "a weak but for society important research field" that suffered from weak critical mass, fragmented research environments and invisibility in research society. The evaluation underscored the need for theoretical and methodological articulation as well as the urgency to secure critical mass and the regeneration of research competence, to strengthen continued practice relevance and quality in an international perspective.

Swedish architectural research has a history dating back to the 1950s, with a 'golden era' in the 1970-80s, when it had large and more direct funding. Collaboration on a Nordic level began in 1987 with the formation of the Nordic Association of Architectural Research, with a quarterly research journal. In the 1990s, the Nordic Academy of Architecture was formed, today including 16 schools of architecture in the Nordic and Baltic countries.

With only 9 million people in Sweden, and approximately 250 architectural students in total at the four schools of architecture each year, there is of course a lack of critical mass of potential researchers in the country. This weakness was earlier tackled with competitive rather than collaborative strategies between the schools, desperately fighting for space in a traditional research-funding domain.

A Formas seminar following up the evaluation became the starting point for a more systematic venture to join forces, formally launched in 2009 between the four schools of architecture at (from north to south) Umeå University, KTH in Stockholm, Chalmers in Gothenburg, and Lund University.

In 2010 Formas announced the call for strong research environments and a national research school, a challenge that put the strategies of the schools on edge: Were we to compete or collaborate? The choice was demanding but obvious: If we were to have any chance to place archi-

tectural research in the larger academic landscape, we had to work together. A prequalification planning grant was given, hosted by Chalmers Architecture with professor Fredrik Nilsson as the coordinator. Three working groups were established, carefully combining strengths, central questions and complementary perspectives. Critical readings and advice were given during the application process by external experts and the University Research Support at Chalmers.

In April 2011, with the positive outcome, it became clear that the strategy had been successful. The grants were given for five years to build two strong research environments, *Architecture in Effect* and *Architecture in the Making*, and for six years to establish a national research school, *ReArc*. It was the biggest chance and challenge maybe for a generation ahead. An evaluation shall be made in 2016, with a midterm review in 2013.

September 2011 was the formal start of this new collaboration, with the name *Architectural Academy: Swedish Schools of Architecture* (Arkitekturakademin, Sveriges arkitekturskolor), www.arkitekturakademin.se.

The two research environments

The two strong research environments have different but closely linked objectives feeding from three basic understandings of architecture as: 1. *a material practice*, constructing cultures and being conditioned by contexts mainly through artifacts and materiality; 2. *a making discipline*, with its driving forces generated through future oriented, designerly ways of knowing and combinatory actions of organizing and forming complexities and processes in the built environment; 3. *a social practice* and a practice with *social effects*. These perspectives overlap and feed from each other (see figure 1) as well as form a knowledge base in the research school.

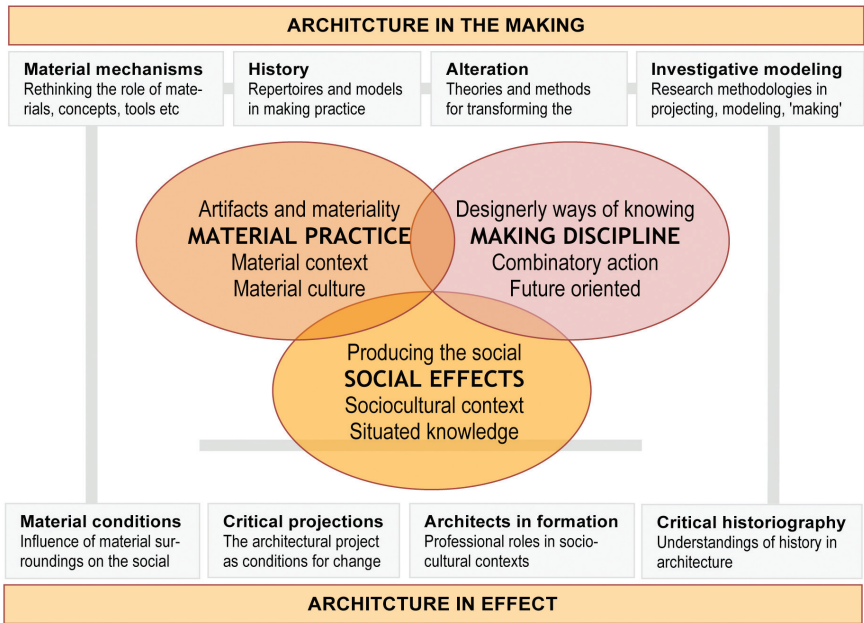


Figure 1

Architecture in Effect: Rethinking the social in architecture (SRE-Effect, with 2,8 MEuro 2011-15) is coordinated by professor Katja Grillner at KTH, and includes researchers from the four schools and from Södertörn University near Stockholm, adding competence from philosophy and social sciences. The focus deals with new theories and methods for critical descriptions and interpretations of architecture, with four sub-themes:

- *Critical historiography* – the role of history in architecture
- *Material conditions* – the influence of material surroundings on the social
- *Critical projections* – the architectural project as condition for change
- *Architects in formation* – assignments and professional roles of the architect in a sociocultural context

Architecture in the Making: Architecture as a making discipline and material practice (SRE-Making, with 2,8 MEuro 2011-15) is coordinated from Chalmers by professor Fredrik Nilsson. The starting point here is practice-oriented research and architecture as an innovative making discipline for sustainable development, with the sub-themes:

- *Material making* – to develop analyses of the material in architecture; concepts, artifacts and tools in design processes
- *History* – investigating history as built environment and tradition
- *Investigative modeling* – explorative, digital processes and "hands on" modeling
- *Alteration* – conservation and transformation as architectural practice, existing built environments and cultural values.

International guest researchers, expert advisors, postdocs and doctoral students will be linked to the two environments.

The National research school, ReArc

The Swedish Research School in Architecture, ReArc (with 3,4 MEuro over a period of six years) is directed from Lund University by professor and dean Lars-Henrik Ståhl, and addresses crucial challenges in society related to architecture and urban development, such as

- Changing conditions related to migration, climate etc
- Practice relevant research – to educate for research in practice
- Focus on theory and method
- Architectural research perspectives – technical, social, humanistic, artistic, scientific

The research school will start in February 2012, with the first recruitment of doctoral students conducted in November-December 2011 at the participating schools. The aim is to build a research environment that can give long-term strength to the architectural research field and the collaboration between research education, research society and practice.

Thematically, the contents of ReArc will develop in continuous dialogue with the two strong research environments and refer to four architecturally specific domains: a future oriented interpretation of architectural history; the social and technological role of architecture as a material culture; pro-active investigations of the architectural profession and education; and the consideration of architectural design processes and their included stages, perspectives and actors.

At the same time as it shall contribute to the two research environments SRE-Effect and SRE-Making, ReArc shall expand its domains to other themes and also open up towards other Swedish research schools, e.g. APULA (Swedish University of Agricultural Sciences, SLU), including Landscape Architecture, and the *Swedish Faculty for Design Research and Research Education*.

Research frame and approach

One problem to be addressed was the fragmented and non-stringent theoretical methodology, sometimes with insufficient critical stance, that was partly the cause of the marginalization of architectural knowledge production in the research community. When establishing a frame for the environments, the methodological flexibility must be turned into a strength, mainly, as we argued, by recognising the potential of architectural thinking as the common denominator to take architectural research to more advanced level linked to design practice. It was urgent to develop a body of integrated theories, methods, concepts and understandings based on the specificity of architecture as discipline, with academic rigour and with acceptance by architectural practice, legislators and the wider research community.

The specific objective, therefore, is to create a long-term, innovative and strong research environment, which will contribute to the development of theories and methods of importance for society, architectural practice and architectural research internationally. The built environment is seen here as a material culture, and the architectural profession as *a making discipline; a material practice*, i.e. working and developing knowledge through the formation of artifacts and spaces as well as systems and processes shaping the built environment. Special focus and critical reassessment concerns the central role of the artefact, both as carriers of knowledge and as results of making processes, including manipulations of non-verbal codes – “object languages” – and repertoires of patterns of matter (material artefacts) and processes (design methods), and with architecture also as a critical and social practice inscribed by *social effects*. This framing generated the 2x4 integrated themes for the Making and Effect research environments described in the figure.

A call for contributions to a *Reference Manifesto* started the Making activities, inspired by the book *The Landscape Urbanism Reader* (ed. C. Waldheim, 2006), with the aim to produce an anthology of short texts as a start-up to map, deepen and elaborate descriptions of the research field, the state-of-the-arts, important points of reference and the research issues to be dealt with, trigger new ideas, initiate discussions and projects, and to position ourselves in this field by making statements of interests, needs, backgrounds and intended developments of the research. The reference manifesto can thus simultaneously be seen as speculative, tentative and programmatic, as well as strongly empirical with concrete reference material, contexts and documentation of sources – a good starting point for developing a creative and strong environment.

Outcomes, so far

What can be brought from this process to the European discussion? We hope that this description of a collaborative process will encourage increased international interaction. We recognise already that this financial injection to Swedish collaboration activates the ambitions to join forces in research on the Nordic Level, within the Nordic Academy of Architecture. Hopefully it will also be of value to the European activities within EAAE/AEEA.

The professional institutions, such as the Swedish Association of Architects and the Swedish Architecture Museum (Arkitekturmuseet), show great interest in promoting an already growing interest from practice and industry to increase and improve research collaboration with the academy. The so called 'knowledge triangle' is enhanced, i.e. a stronger integration between research, education and collaborative innovation – e.g. the interest from practice to finance doctoral students to gain research competence for practice, the potential to apply knowledge produced by master students, and the ambitions to construct partnerships in practice relevant research. There may be a catalyst effect here for flows of knowledge between academia, society and industry. This promotion of architectural research can also push forward architectural thinking and making as an attractive mode of producing knowledge in transdisciplinary settings and interdisciplinary collaboration. Through increased participation from practice, other fields of research seem to become more interested in working together with architects and architectural researchers. So, we can already perceive the increased acceptance of architectural research and education in university and research society.

In terms of the four schools, the increased critical mass of the doctoral environment is, of course, a primary effect. We sense a shift from being separate local institutions to the idea of one, flexible environment distributed at different locations, a fundamental shift of thinking which of course can be linked further on internationally. Researchers, supervisors and teaching staff become shared to a greater extent; doctoral students move between schools; diversity of research can flow without being hegemonized and domesticated in 'departments'.

The most considerable effect may concern the education of architects; a shift from traditional master-apprentice teaching to an emphasis on the creation of high quality learning environments as the basis of education. The segregated culture of educating architects can be replaced by a multitude of roles and arenas united by architectural thinking, doing and sharing. Levels of master, postgraduate and doctoral students may merge into mixed working teams where the design studio is fused with the lab milieu. Further discussions on how to create learning environments would, as we see it, be interesting to discuss at future EAAE meetings.

Susanne Komossa

Professor, Technical University of Delft, School of Architecture, Delft, Netherlands

Doing More with Less Human Resources at the Faculty of Architecture, TU-Delft

Introduction

Taking into account the current situation, for sure Delft University of Technology including the Faculty of Architecture faces serious budget cuts.

Within the European framework, Delft is in regard to financial means provided by the government somewhere in the middle. The faculty teaches in total 3.400 students of whom 1.985 Bachelors and 1.370 Masters. One third of the students are from abroad. Within the two year Masters program Architecture accounts for 970 students, Real Estate & Housing for 125, Urbanism for 150, Landscape Architecture for 30, and Building Technology for 60. Also in regard to the number of architects related to the total of the population (1 architect / 2800 inhabitants) the faculty is in the 'middle' between North and South.

Writing this rapport in November 2011 it becomes clear that Europe is in serious trouble, partly due to politics and economy but also to what one could call 'overdue maintenance'. Only the Scandinavian countries managed to stay out of all these problems, at least up till now.

Cutting costs

A number of measures are taken on faculty level, for example reducing the number of yearly entry of first-year students from 650 to 450 (-30%). In the long run this means a 20% cut on the total number of students & staff of the current 2000 bachelor students.

Down-sizing the number of yearly external entrances in the two-years masters program of only-masters (150), Erasmus (35-60) and International Masters (150) could be the next step.

Annual fees for Non EU Masters students have already increased from €8.000 to €12.500 (NL & EU € 1,713 in 2011- 2012). Cost price is approx. €16.500.

Of course lowering student numbers reduces faculty's staff cost on the short term (at the moment: Scientific faculty: 842, majority part-time). Moreover, it will lead to a loss of governmental financing in the long run. One wonders where these students, who were not admitted, remain? Do they enter other academic disciplines or will they disengage from studying altogether?

Anyway, within the field of cost reduction being keen on costs for housekeeping & energy, and obligatory payments based on past-time privileges, saves quite a substantial amount of money too. Keeping an eye on these costs is interesting within an average household but certainly also within faculties.

Working on the content and didactics

The current situation urges us to put more focus upon the organisation and content of teaching & research on the department and chair level. Generally spoken, a period of more focus could / should be very fruitful. Potentially, it leads to more mutual exchange and collaboration, and to a better coordination of what is researched and taught.

In affluent times faculties and people tend to extend and diversify. Groups, programmes but also curricula get fragmented in due course, for example minuscule subjects of 1.5 European Transfer Credits (ECTS) offered become common.

Shrinking means the opposite, putting things together again. In fact, concentrating of what should be the core business is a healthy and inspiring activity.

For example, measures taken are the revision of the Bachelors program in order to reach a more coherent program, reducing doubles and unnecessary repetition. In addition, the number of compulsory master courses and graduation studios is reduced. This renders the opportunity to stop programs that proved to be less successful. Furthermore, didactical 'lines', i.e. curricular threads can be improved within coherent master tracks in regard to the relationship between didactical forms of design studios, seminars, tutorials and lectures.

Even more, linking research and teaching means to allow master programs to be research-driven. Students work on the same issues as staff and are actively involved through collecting and selecting material, writing and drawing. Even bachelors' students can participate in this work, for example in by contributing material according to the Delft Method of Plan-Analysis.

A digital medium like 'Blackboard' sustains more collaboration within the design studios, building one research and design group or theme on top of the other, and student groups communicating actively with each other.

In addition, concentrating research programs within bigger domains has proven to be fruitful. The Department of Architecture concentrated and limited its research activities to six fields of research relevant to today's professional education, research and contemporary issues of the city and its territory:

1. The building: types and models
2. Architecture and the city: Public Building / Public Realm, Composition & Tectonics
3. Borders & Territories
4. Mapping Randstad Holland (The Greenheart Metropolis)
5. Revisions: Changing Ideals and Shifting Realities
6. Positions: The Discipline of Architecture and its Instruments

Future opportunities within the field of research could be provided by concentrating on 4 instead of 6 research fields, establishing a clearer relation between research field, potential stakeholders (funding) & (PhD) work on programs.



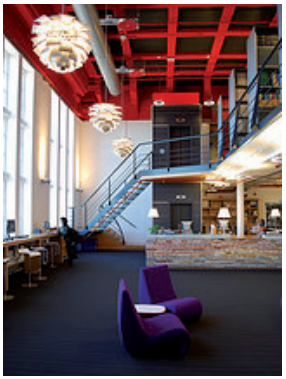
Faculty building



Book presentation



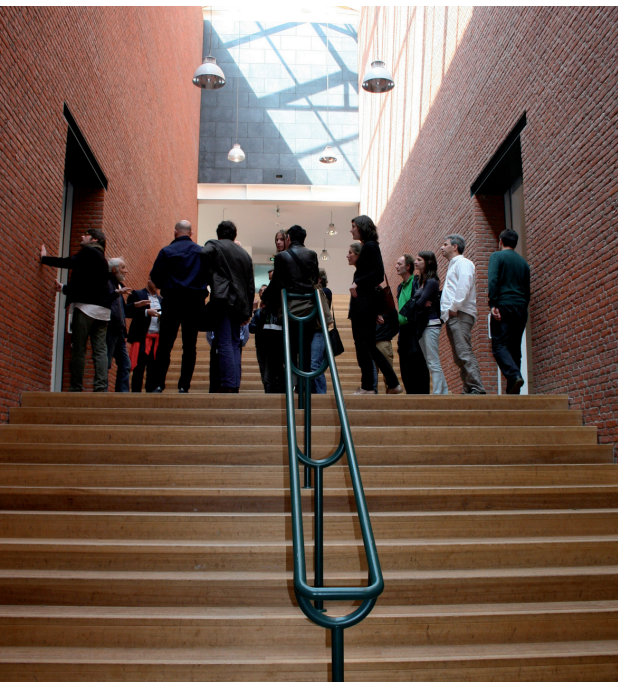
Exhibition space



Library



Students at work



Staff at work

Moreover, a Graduate school for PhD research was just recently established. It is a centralized school on faculty level offering research courses tutored by senior researchers and helping with funding of publishing PhD-theses. More generally, a central library digital depository for PhD-theses and graduation projects has been set up. Regular peer review meetings of PhD-progress are organised on department level.

Last but not least, 'teachers teach teachers' has just started. For example, teachers/researchers specialized in sustainability, offered a one-day course for all faculty. Courses on building re-use, renovation and restoration are planned.

Funding: fundamental problems yet to be tackled

External Funding of teaching and research is probably the most difficult issue. It is not only hard to get but raises also some fundamental questions.

In essence, first of all there is the chicken and the egg question: should research and therefore teaching programs be founded (only) on research that is potentially externally funded?

If so, what to do with 'fundamental research' and general obligations in regard to good teaching of architecture as a relative autonomous discipline and its practise?

Moreover, how to deal with the differences in life circles? How to relate short term funding of actual questions within society vis-à-vis long-term development of teaching programs, expertise and PhD-processes i.e. more fundamental research?

Additionally, how to develop a long-term perspective? What should be leading in regard to the choice of potential financing, the long-term program or the short-term opportunities?

Finally, how to deal under the current circumstances with received grants? At the moment we are able to write applications within the framework of expertise and time of our existing staff. In case money is granted, who supervises the research and executes it within the extremely tied-up, foremost directed to teaching, time schedule of the current staff?

In order to clarify these biases: last year we received a commission to research the combination of elementary schools and extra curricular day-care. The commission allowed us to write a new design brief, to organise a research-by-design studio with 80 students and to execute a plan analytical and thematically research which included the publication of a book, an exhibition and a lot of other attention/spill-off regarding the results.

In order to conclude in regard to this commission: we got it based on expertise developed earlier in this field and we were lucky, extremely lucky. Indeed, we were able to attract extra young staff to collaborate and it was fun. However, the question remains, how to base a long-term teaching and research practise on these kinds of fortunate, 'practical' co-incidents?

In essence, we still do not know how to develop a sound and intelligent funding strategy in regard to research, teaching and staff development within the field architecture that allows scientific rigour and social/professional relevance, long-term and short-term, at the same time.

Maybe this could be a central topic of one of our next meetings?

Johan Verbeke

Sant Loukas School of Architecture, Brussels, Belgium

First of all, I would like to thank the organizers for giving me the opportunity to contribute from a Flemish/Belgian perspective to the challenging theme of 'doing more with less human resources'.

The theme of this session is a very difficult and challenging one. Of course, human resources, finances and number of students are related; the relationship depending on the local context of the school and the local legislation. 'Doing more with less human resources' is a difficult theme to discuss and explore as the issue so much relates to the local context, culture and even legal aspects within which our schools have to function. And as we all know and have been discussing in the past, this context and culture hugely varies over Europe.

In Flanders, each person finishing secondary school, is allowed, since many years, to enter higher education for whatever study he/she chooses. This creates sometimes difficult situations at the beginning of the academic year student numbers fluctuate over the years and the final number entering a school is sometimes only known just before the start of the academic year. This requires a flexible organization from the schools.

It has been for a long time a government policy to have open access (after secondary school) to higher education. Because of this, for most disciplines, the success rate after first year is rather small (around 50%). In Flanders, more recently, a credit system was introduced. Since then, the situation is less transparent, but it can be expected not to have changed seriously. On top of the credit system, the government installed a complex system to put pressure to students to finish their study in a reasonable time. Discussions have started to introduce an orientation test in order to help future students to better decide on their field of study. All schools also try to improve on the drop-out rate and try to avoid loss of energy invested in failing students. This should help to improve on efficiency of staff efforts during first years of study.

Overall, budgets have been cut during recent years and this has increased the workload of staff. The government decided to reduce funding by a flat rate reduction leaving it to each school to decide how to solve the financial problem. Student numbers have also been going up. As funding comes with a serious delay, this creates additional problems and increases the teaching load for staff.

During a period of 15 years and in small steps, workload has been changed from teaching 1 day of design studio per week to full time involvement in the school. Administrative burden has also seriously increased (accreditation process, procedures, ...). It is forbidden for full-time staff to be involved in an architectural practice. All these aspects have put a serious stress on higher education. This is not only the case for schools of architecture, but almost for all disciplines as total number of students in higher education is still growing. For the art schools, for example, the situation is even worse; they face serious cuts in staff and activities.

It is anticipated that in future funding will be based on a 50%-50% mix of student numbers and research output. Compared to other disciplines, the field of architecture has difficulties to have its research output recognized and valued. Hence, it can be expected that funding will continue to go down in the coming years. Since 2 years, there is a special committee discussing quality

criteria for research in Architecture and the Arts. It becomes now accepted that for the creative disciplines art objects, designs, projects and buildings are very valuable outcomes of research. All staff in higher education are considered civil servants and after some years, get a fixed position. They have serious autonomy in teaching and actions. When faced with changes in staff structure (doing more with less) this complicates management and human resource actions. It frequently delays developments and requires careful management of the change processes.

Budget cuts imply a serious risk for loss of highly specialized (part-time) staff and increase the need for collaborations and staff exchanges (national and international).

Finally, Belgium saw recently the accreditation of the first higher education degree offered by the industry. It can be expected that the industry becomes more and more active in the educational sector in the coming years. The implications of this development are not yet clear, but it seems that higher education will be challenged by private and industrial organizations.

Higher education is based on activities related to learning processes (teaching) and to knowledge processes (research). When focusing on the theme of this session, it is important to consider the impact on both types of activities.

In relation to teaching, we can make the following reflections:

- teaching is one of the core processes of higher education. Transfer of knowledge and understanding to new generations is critical. Teaching hours are usually strictly scheduled and are the more daily urgency for staff compared to research; so, the danger is that schools (explicitly or implicitly by teaching load on staff) cut on their research activities to solve their short-term problems. This, of course, will weaken their long term research endeavors and competitiveness;
- it is very difficult to reduce teaching load for staff and cut in teaching activities. This requires a change in curriculum and that is a long-term process. Hence, it is very difficult to manage and change teaching activities of staff;
- there is a trend to have more and more students per design studio; especially compared to 10 or 15 years ago, this trend can be seen;
- there is a growing number of short workshops by visiting experts external to the school;
- there is a growing synergy between teaching and research projects; especially when design studio staff is involved in research by design, they report growing interaction between their research efforts and their teaching;
- the number of contact hours for students have already been reduced seriously in the past.

In relation to research:

- as already elaborated above, a reduction in research efforts only becomes clear after some time; hence the current problem of doing more with less staff incorporates a long term risk for higher education. We cannot tolerate a reduction in our knowledge generation processes.
- some schools have an overall growing budget because they managed to attract external

research funding (examples include ETH Zurich and the schools in Sweden which obtained a huge grant from FORMAS). This may inspire the others to compensate a diminishing budget for teaching with efforts to increase research budgets. It may require difficult discussions with other disciplines, but when we want to establish research in the core of the field, we need our own funds to support this.

- developing synergy with practice can create additional energy. The developments in research by design and design practice research are very promising in this context. Design studio teaching, architectural practice and research activities can have mutual synergy and bring additional energy to the schools.

What can we learn on a more generic level from all these issues and developments for our debate?

1. Schools could try to avoid inefficient teaching efforts. Pedagogical innovations and use of digital platform may be helpful for some of our courses. The OIKODOMOS project can be used as an example for learning on housing. It created a virtual campus model where expertise from different countries and universities can be combined in a joint learning experience for the students. It allows international expertise to play a role in the curriculum.
2. Schools should be reluctant to reduce research time of staff. Even the opposite, in research and competing with other disciplines lies a potential to grow (as is also shown by the Swedish example) and find new funds and possibilities.
3. Schools could try to develop a stronger and more structural collaboration with practice. There are importance processes of knowledge creation and innovation that are taking place in architectural practice. Research by design could be the key to make this link and bring the knowledge processes in practice to another level, while at the same time bringing innovation and experience from practice in our research environment.

We should act and pragmatically try to find solutions to our problems. As was shown by a student of arts during our final year exhibition on our campus in Ghent in June 2011: "In the end everything will be all right, and if it is not all right, it is not the end".

Debate

Stefano Musso, Italy

We had very different examples some of them explicitly related to the problems of diminishing human resources. Also in some cases there seems to be no cuts. I was also astonished by the example of the French government that at least the law protects the number of teachers. I think it would be difficult to explain why architecture should be in the centre of attention of our society not in traditional terms. Despite the defects in our schools we are able to invent some different professions. We are not able to see what will be in five years on actually. What happened in Italy some years ago was that they cut the places for students who wanted to be admitted at the Faculty of Medicine and now they are in a great deal of trouble. I think the problem does not only concern architecture: it stems from the relationship with the present political system, the social system, the economic system, and the financial system. Have we a team of education that has been one of the main conquests of our times in crisis? This was one of the main achievements of last century and now this is now in crisis. This, in my opinion, is one of the most challenging things.

Sebnem Hoskara, Eastern Mediterranean University

It is interesting to hear about different experiences from the panel. I would like to share my own views about this theme of human resources because I believe it is one of the most important aspects of the university educational system in general, and obviously particularly in the case of architecture. In our university system, there are some expectations from the people, as human resources I believe, which are more or less the same in different cases. The most important, if they are put in order, is teaching. This requires direct contact with the students, with exams, design studios, the environment and so forth. The second one is the research, which involves many other aspects such as publications, conferences, meetings, seminars and workshops that make up the research environment. The next one is the service to the university, in whatever way. It may be that we must attend some meetings, do some commission work, some paper-work; some of us work on an administrative level and again this has to be done as human resources. The final one is the service we give to society: we have to show that we are producing something for society, and to share our findings with society. When we look at these four very important responsibilities that we have as people in architecture, we see that they mean a lot. We are responsible for many different things at the same time. This is why I believe that we cannot actually do more with fewer human resources. We can do some of these things, but not more. The human resources should therefore be particularly present if we want to carry out all these responsibilities in our institutions. The quality of the institution and of our schools will be reduced. In conclusion, my point is that we cannot do more with less human resources.

Ramon Sastre, Spain

This morning, we talked about fewer finances and resources and the fact that there may be less staff. I was thinking that the idea of human resources needs something more. We can do more if these fewer resources are better resources; we could do more with that. Yet the fact is - from

what I know - that the way that the cuts have been made has nothing to do with quality and with what is needed. Our staff are civil servants and some have been fired although it is very difficult to get rid of civil servants. In this case, however, many good people have been fired while there are others who are not so good or important. Maybe therefore we can do more. We can have less, but with more substance.

Pierre von Meiss, Switzerland

I think we have to address the question of what is going on in the United Kingdom. Students, especially architecture students, have started to pay something like 75% the real cost if I understand rightly. At the same time, we say we are doing research connected to teaching. There is also a danger behind all this. Now the students are not only going to pay; in addition, they are also going to be used by their professor as cheap labor! There is a problem here. I did not know about this problem at Delft - that was new for me - but I know that in the United Kingdom it is a different situation because of the way things are.

Susanne Komossa, The Netherlands

I think there are two kinds of research, which involve students. One is, let us say, in the professor's interest, but there is also another way and maybe we do not have time to focus on this. Of course we try to choose our themes based on aspects such as, for example, relevance in society. I am quite sure that the profession of the architect will move in the direction of delivering expertise. It will become more and more research based. I think we already make a move to involve students and to train them not just for a PhD but to be able to be very unbiased and analytical. It is no matter whether you design chairs or whatever later on. It becomes more and more important. I was talking with Chris Younes this morning and there is one unique point in architects: they render solutions before they move on and we really try to finish that.

Stefano Musso, Italy

From my point of view, of course we are talking about strategies, which leads to something else, to alleviate or face a difficult situation. I think we should, at least, agree that every strategy, every reaction we can imagine should require our personal, moral and ethical responsibility. Otherwise, we will find a lot of problems like those that were mentioned earlier by Pierre von Meiss. Let us trust at least the fact that we are trying to find strategies responsibly. Every kind of solution for the season. They must be built on assumptions of responsibility.

Martin Chenot, France

I think sometimes we have to say that while we always try to find solutions as architects, sometimes it is too much to do. Therefore, we have to face the opposite and say, that's it, it's not possible. The other thing is about the four missions that were mentioned: teaching, research, participating in university life and the responsibility towards society. I am fond of that last one because so much of our programme is actually this: the feeling and the understanding of society and of what architects design for. I think we have to explain this. If I ask what are we useful for in terms of society, you may answer: better living, better environment, finding

solutions for the future in buildings, creating public spaces and such things. Explaining this to society is however quite difficult. We have to continue this mission; in St. Etienne, this is written into the aims and objectives of the school. This is one of the most important missions we have. We have to teach and also to explain this, not least to the kids - and we have 1,000 kids coming into the school every year - and so this is not the last, or least important, mission we have.

Catharina Dyrssen, Sweden

I very much agree that to try to argue for the relevance in society is very difficult and very important in research, but also in practice. Students' working in close connection with society, with their creativity, is part of that invitation. I think that what we spoke about last year, about so many different and innovative teaching modes, or rather, learning modes, is something to bring back. This is where students learn from one another, where you combine teams, where as a teacher you are saving resources, but it becomes about pinpointing when you actually have to go in and be a teacher and when you give input to the students. I think there is a lot to do on those kinds of microscale. It is a question of pinching the air in the system and really using the teaching staff not to keep the students back but encourage them to thrive. This is a mission where I believe we can learn from one another.

Adalberto Del Bo, Italy

What is the average amount of the applied research funds that comes every year and what is it in relation to the annual budget?

Susanne Komossa, The Netherlands

I have to say that actual amounts are actually difficult to assess. I think you never know what is in and what is out. This means that on the faculty level it could be quite big but when we look at the Department of Architecture, it could be quite small. You could look at the whole, or you can look at a certain person. For this reason, I cannot give you an answer. Let me put it another way: we do not have a definition of the rate. You were talking about having a big commission but if it does not affect the university, but puts you in work for twenty years, so then you have another problem. So to define the main profits from funding is almost impossible.

Johan Verbeke, Belgium

In our case, it is still only a small proportion.

Stefano Musso, Italy

There is furthermore the question of human resources; it is a matter of finding new solutions. The funds that you receive from the government in your schools, have they had any effects?

Catharina Dyrssen, Sweden

It has already had an effect. Actually, it was a shift before. I would say that architectural practice and public institutions, planning institutions, municipal architects' offices, and also big architectural firms have gradually - in the last five years or so - become much more interested in research and in collaborating and dealing with academic institutions in order both to raise their own competences but also to gain competences from academia. This new finding has some connection with that which is that architectural research has genuine relevance to society. This is a positive spiral: we now see that academia has a high status again. A few years ago, everything was practice. Now, however, there is a new interest in the quality of academic competence. This is still moving very slowly, but it is moving in the right direction.

Martin Chenot, France

In French schools, we do not have a research team, we have researchers, but not an actual team. There are five people. But in some of the schools like Grenoble, for example, it is not part of the agenda.

Johan De Walsche, Belgium

I was hoping to find a way that structurally combines funding with scientific relevance but also research that has social relevance, at the same time thinking about the risk students are at. I think there is another risk. Indeed, I know examples where Master's students did research by design. It looked very nice and some private clients were involved with our work. Yet, the client can, for instance, like the renderings of some students in terms of final results, however, the good examples in terms of results are not necessarily evidence of what the student has actually learned from this research. So there is another danger that the client is very much interested in projects that are not even the best projects and not the same as the best results of the intentions that you have as an educating institution. On the other hand, I think that it is quite an interesting formula to try to keep this connection. In my experience, it is a way to maintain innovation in universities and in academia. I think that very often we have the complaint that innovation today is in the offices and no longer in Schools of Architecture. This can be a strategy to place innovation back in the universities; it can be an opportunity. The second is related to the experience of the students. Those who are involved in this kind of research find design projects that are related to quite societal relevant questions. They develop a very strong commitment to their task and start thinking in a very complex way about the position of architecture and of themselves as future architects in society. I believe this is the most important experience we can give to students. In this case, however, I think that there should be some conditions imposed when taking this kind of contract research. It would be as a university that with this kind of research, you use it as an incentive to combine it with another level, maybe a more theoretical level or a more fundamental level. It is, however, an opportunity for a university to have something with which to continue to this level because obviously they are not able to reach this sort of level, because they do not have the money to do so. This level can return to education; I think it is an opportunity for schools to look for this kind of research if combined with certain conditions.

Stefano Musso, Italy

I think it is a crucial point for our future because with fewer human resources perhaps we can find ways of using resources in other ways. Putting architecture into society is a reflection of the present day.

Chris Younes, France

I think it was very interesting to see what all the schools were doing to invent ways and to adapt to these new challenges of funding. I would like to make some three points. Firstly, I think we are in a new context where it is something of a challenge to be positive. I believe that in the future we must not be victims, but we have to be creative to find solutions. I do agree with what has been said: we can do this. At the same time it is paradoxical because it looks as if it were magic and I think that educational research is not magic. We need commissions so I think that in order to face this crisis and the necessity to make do with less, we have to be inventive as Constantin Spiridonidis explained yesterday. We have to be resilient but it means not only to adapt but also to find a way to be more collaborative and to share the ways to give resilience. This is a big question. It would be a huge problem to be more competitive and to say we are inventing very brilliant solutions and at the same time we know that research needs means. It was very interesting in this panel to see that the Nordic Academy decided to have a very big strategy about money because research without money is impossible. We must therefore be very clear about this; we have to be, as the philosopher Deleuze said, sometimes, to be creative you need to resist. To create and to resist are two faces of the same thing. It is very important today in our meetings to see how things stand, but at the same time to put some conditions on responsible education and research. Otherwise, it is impossible. As a researcher and a teacher for very many years, I have had a great struggle for this and I know today for the new generation we need means. It is not just a question of magic, of some magic position, magic language. We need means, so we need not only to adapt but also to create organisations wherever possible to argue with political decisions regarding the means we need. Our assembly would help us a lot if it showed each of us to be more visible, to understand everything better and to see how it is possible to grow. I could see that Martin Chenot explained that the head of the twenty schools in France tried to organise something, to have a common position and the Norwegian Academy tried to have one. This is something I see as very important, not just to respond but to challenge, to be magic and positive and to respond with this. We must be very responsible for educational research and so to argue in a very management-dominated culture that we need the means, be that private or public money.

Martha Thorne, Spain

I appreciate those comments very much. There are two aspects that I would like to add. The first I heard this afternoon but also this morning concerns the pronouncement of certain broad assumptions. The truth is free labour, the American market system or this or that. I would suggest that we be very careful about our assumptions in a changing society and that we look very carefully at the reality before making those assumptions. Things may have been a certain way in the past but that reality may not pertain to the present situation or it may not permit us to go forward if we just hold onto an assumption without debunking or analysing

it. Regarding the other point about finding research funding, private or public, I think it is a huge challenge. Just to clarify my own opinion that may have seemed very optimistic: I would be the first person to say that there are always two sides to a coin. The moment that you accept money, be it from a private company, city hall or an organisation, if that comes with too many strings attached, it is not free money, it is not real money. It is a millstone around your neck. I think that while there are many new sources of funding, and we see this consortia of ceramic makers with a high point of organisation, city halls, regional governments, again there the assumption should not be that this is a wonderful gift; we should take a careful look and find out if there are strings attached and then - provided there are not - use that money in the best way possible.

Michael Eden, Sweden

I was thinking a bit about the term "human resources" and I must say I am a little puzzled from the discussion how it seems to be just about staff, number of persons, positions, organization of work and not too much about how we measure quality in making them into human resources. I think the common experience is that students coming to us are an elite because we get the best students and that is a good start. I said that I know we get the elite of students and that is a good human resource but I have heard very little discussion about the quality of the staff. What are the best human resources for those that are responsible for these students?

Stefano Musso, Italy

One of my first intentions of this session is that we are not only speaking about the ratio and numbers but behind those numbers are people, their quality of practice and their competences.

Susanne Komossa, The Netherlands

This is probably not the right answer, but of course we have different procedures. Sometimes I used to clear out some problems concerning quality of teaching staff, absolutely. And then you may ask who makes those decisions and how. People are asking how. It depends firstly on what kind of culture you have. In The Netherlands, for example, in city administrations there is a union-based system, whereby you are 55 years old and so you have to go. In the university, there are other possibilities. Naturally, everyone knows those in this school who are not always doing anything and in such cases it is simple to ask the person to leave or to explain what he or she is doing to justify being there. That is another way of doing it although it is not exactly about quality, I understand.

Catharina Dyrssen, Sweden

I would just like to go back to something that was said earlier which was that leadership of academic heads of architectural schools and academic institutions will be more focused on how to compose the teaching and research teams for different missions. I think this composition aspect will be more important in future.

Manuel Nicolau Brandao, Portugal

First of all, I am not afraid of changing. I have been changing for forty-two years: I have been teaching and now I am finishing my career. The problem is that changing has something to do with stability. Changing cannot just be a permanent experience in teaching. You have to think about what you have done, then what you have to change is a little bit of the experience and to find out what the results are and so on. That is related to the stability of the corpus. We have to have the experience with some degree of permanence in order to make observations, otherwise it is just an adventure and we should not be allowed to do that. This has something to do with the question problem we have debated this morning. The older schools, not the younger ones that can choose permanent students, or new teachers and change them and be the best for their jobs, but teaching groups that are permanent have to choose which one we need. The new ones can do this as well. Do we choose the ones that have to take a permanent education, a month's research in a school from an academic point of view as we recommended this morning? Or the ones that have practical experience and expertise and can bring to the school their own experience? Do we improve the education of the school with the practical demand that we also intend to achieve? So which side are we on? Which is the profile we prefer? If I have to choose between two new teachers, which do I choose? The one who has spent part of his life working in an office, maintaining the experience of the practical life and to bring that to the students and to the school from the professional life? Or do we just want someone like me who spent 24 hours a day in the school? But I know nothing about building! Absolutely nothing! The problem of which one to choose is a problem for all schools. It is not an academic question, it is one we have to think about because of the things we have said this morning.

I would like to make another point about money. A new graduate, a talented young man has finished his studies. We invite him to teach in the school. But the two or three hours of lessons we can give him are not enough for him to live on. Fortunately, because he is exceptionally good, he has a grant from some foundation or another, he can win and make his doctorate, because he is forced to. This is very good, but he is not linked to the school in any working professional contract. So he has to stop teaching. He did the studies, the PhD, the subject very interesting, with flights and North Korea and so on, but in the end he does not have a job, because his job was fulfilled at the school. This happened in Portugal, in my school for example, it is a real question, a real problem. All this needs to be discussed.

Constantin Spirionidis, Greece

When we planned this session, we had in mind something that was not mentioned broadly in this discussion; this is where I would like to add this to the various issues about which we have already heard. One of the most vulnerable issues, because of the reduction in the number of the teaching staff in the schools, which is already a reality, is the elected courses. For many years it was the percentage of elected courses in the block of the curriculum that was considered as a kind of quality of the schools since they gave students the possibility of navigating through the different subject areas in order to construct their own personal identity as a graduate. That was something that most of the schools - as far as I know - supported. It was an expectation on the part of the graduate. As we move increasingly towards an individualised conception of the graduate, and as we realise that the architect must create his or her own identity, the reduction of the number of staff members has a direct impact on this aspect of the curriculum. We are,

therefore, experiencing something of a contradiction whereby on the one hand, we are asking for a more parametric, flexible and easily navigated condition through the five or six years of studies. On the other hand, the reduction in staff imposes a very strict curriculum with a very precise number of modules, which is compulsory for the students to follow. This is an issue, because the one is surely the expectation and if someone takes into account the contemporary debate on the architectural avant-garde, or on the other hand, the philosophical debate about the individual today, this strict, one-way and single truth perception of the curriculum seems to be incompatible with the actual condition. Therefore, this situation, if someone considers that we cannot truly intervene in it seriously, may lead us to trying to incorporate in the compulsory courses the possibility of different forms of navigation. That is to say that most probably, this will help direct influences on the way that we teach the compulsory courses. It is of course something that we may be discussing in the session on Tuesday morning, but it is already becoming a link between the issue with staff, the curriculum and then the teaching. The reason why I am remarking on this is to bring into the discussion the fact that all these things being discussed are so strongly related to each other that we need to look at them all in order to come full circle.

Stefano Musso, Italy

Thank you for those very important remarks, because of course we cannot forget the impact on our teaching and on the way we act because if we cannot feel that, if we cannot feel or imagine that everything is changing, we are reacting happily or unhappily to what is happening, leaving everything that is part of the process as it was before. We have to make changes, but first we have to change something in ourselves.

Sebnem Hoskara, Eastern Mediterranean University

I was going to comment after the previous intervention. It is just a question concerning human resource management. I think all the discussions, all the comments have been connected to the question of management of resources. I would just like to make a final remark about that.

Stefano Musso, Italy

This is another important remark because, as has been said several times before, the crisis is not the same everywhere. There are not the same results, the context is different, the systems are different because, using again the information that was given before, the number of permanent staff such as professors who are employed in the higher education system is protected. There are also regulations protecting the professors which means that we have to wait for them to retire from their different positions in order to be able to substitute at least one for every ten professors. Are we sure that the human experience, the human attributes and sensibilities of this person is something that we do not care about? Are we only speaking about technical competences? There is a world that is changing but again I think about the situation of your school where the staff have nothing to do with the tenure track. Every year must gain its own position. Should we change that? It is a very different situation from the one I am in where I have to manage my staff. It is not that I like to manage my staff, perhaps they want to manage themselves! However, I must organise the faculty in which 99% of the staff are permanent.

Session 3

Doing more with less time

The architects we are educating today will arrive at their professional establishment at least after ten years. Is it possible to preview their necessary profile now? More and more such a prediction becomes difficult taking into account the fact that two years ago it was not possible to predict that one out of four architects will be unemployed today. This is why schools of architecture are actually rethinking the, more or less, fixed profile they tended to create over the past years.

If there is a question of a new, unpredictable, profile of the future architect what has to be our strategy for the learner of today?

Which are the most significant competences that this architect has to fulfill in order to be able to adapt in the fast evolving society?

What is the fundamental knowledge and skills she or he has to acquire from the education in order to become a competitive and successful architect?

Which are the strategies of our schools of Architecture regarding this major issue?



Chair:

Constantin Spiridonidis, Thessaloniki, Greece

Introductory panel:

Selma Harrington, Brussels, Belgium

James Horan, Dublin, Ireland

Alexander Wright, Bath, United Kingdom

Sven Felding, Copenhagen, Denmark

Introductory Panel

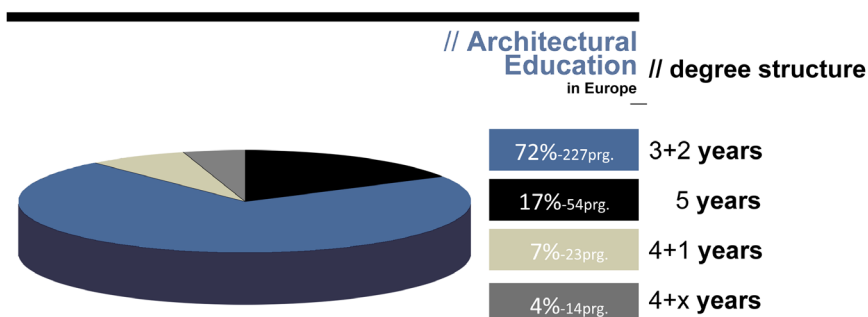
Constantin Spiridonidis

Greece

Time has always been a burning issue in our debates on architectural education. As teaching time, as student and staff workload time, as knowledge and experience maturation time, as studies' duration time. As time invested, as time spent, as time gained, as time used, as time to be generated, as time to be exploited by our architectural education system. Many debates on the above approached the question of time in architectural education and took place in this room in all previous years. It is difficult to record a meeting of Heads in which time was not one of the themes in our discussions. However, this session is designed not to repeat issues already discussed but to approach time from a very specific point of view: that of the time in architectural education under the conditions that are emerging from the international crisis.

Time is a parameter of architectural education strongly articulated with quality but it is also an extremely vulnerable one as it is directly translated into costs. Nowadays the finances of schools appear to have significant cuts, due to the international financial crisis. This is why time in education and more specifically in architectural education is under the threat of compression. This is not at all a new threat. On the contrary, there has been a long discussion about the duration of studies in which the academic world insists to define as minimum duration of studies the 5 years and the European political system through the European Directive, at least during the last 30 years accepts a 4-year duration architectural education. However, nowadays this institutional definition of time of studies appears to obtain gravity in the dynamics of architectural education.

According to an inquiry ran in 2006 in the framework of the Erasmus Thematic Network ENHSA no schools of architecture were detected having 4 years as their duration of studies. Among schools of architecture 72% of the schools had already adapted their curricula to the 3+2 model, 17% adhered to the old format of 5 or more continuous years. 7% followed a 4+1 scheme and the rest 4% organised their curricula in 4+more than one year (see table 1). According to the same inquiry, this strong tendency to the 3+2=5 years model was broadly decided by



the schools themselves. 61% of the schools reformed their curricula voluntarily as a matter of choice and not under the obligation of a national law. On the contrary 39% of schools were adapted to the Bologna schemes under the obligation of a new law keeping the 5 years as minimum duration of studies. If the minimum duration of 5 years is a generalised attitude in architectural education in Europe then what is the reason for having an institutional framework making reduction to this broadly accepted length of studies.

The minimum of four-year education in architecture dictated by the Qualifications Directive was established in the eighties in order to not exclude some European Countries like Germany and the Netherlands who, at the time, had 4-year studies. Since then many reforms of the curricula took place especially after the Bologna Declaration and transformed completely the landscape of architectural education in Europe. However, nowadays, a series of possible negative consequences of this estimation of time in architectural education in Europe could appear.

Following the Directive, a number of schools of architecture split their curricula in 4+1 years in order to comply with the Bologna Declaration. As the Bologna Declaration demands professional rights in the first degree, the argument of these institutions is that the only possibility to give rights to the profession is, according to the Directive, four years and for this reason the only possible split of architectural studies is to four plus one or two years. In this situation we can observe that in Europe there are bachelor degrees the holders of which have professional rights as architects and other bachelor degrees the holders of which do not have access to the profession of the architect.

This situation is completely opposite to the European policy's objective for the harmonisation of degrees, as access to the profession is a decisive parameter of the status of any degree. In the same time in the Directive's annex bachelor and masters would appear giving access to the same professional practice creating a big confusion in the already complex constellation of architectural degrees; even more so, if we take into account the existence of a big number of three-year bachelors with no rights to access the profession.

The re-appearance of four-year architectural degrees assuring access to the profession, even if it is against a pan-European consensus of the five-years minimum duration of architectural studies, is possible to create pressure towards a four-year regime of minimum duration. The financial crisis is one of the decisive factors that can support this pressure, as it obliges the states to look for reduction of educational funds, and the elimination of the years of architectural studies from five to four would be a decision legitimised by the Directive as a European legal document. This way the Directive risks to appear to be the legitimisation of the reduction of the length of architectural studies, the diminution of the value of architectural degrees and the decrease of the quality of architectural services. Another supporter of the same pressure are the new private schools of architecture, which in many European countries are growing in number. In their competition with the public ones some advertise their capacity to offer a four-year degree that complies with the Directive, giving rights to its holder to provide architectural services across the European Union. Would the Directive define the minimum duration of studies in architecture at five years, the above risks would be eliminated completely. This way the Directive could continue playing the role of the defender of the quality of architectural studies and of the safeguard of the quality of architectural services across the countries of the European Union.

There is another dimension of time in architectural education that is affected by the fast changing conditions of our society and the crisis we are experiencing. This is the case of time as future. All architectural education systems are designed on the basis of a conception of the architect's profile structured upon an ideal profile of professional architect as it is formulated by the present conditions of the practice. The fundamental and, in most cases, hidden hypothesis of this strategy is that this profile will remain stable and unchangeable through the years, or it will have some insignificant transformation to which a graduate can be easily adapted. However we are experiencing nowadays a strong compression of the future time distance in which safe prediction of the validity of an established architect's profile is possible. Such a prediction becomes increasingly difficult. Two years ago it was not possible to predict that one out of four architects will be unemployed today. All these unemployed architects have to find other forms of professional activity in the domain of architecture, which have to develop and to be implemented. The architects we are educating today will reach their professional establishment at least ten years later. Is it possible to envisage their necessary profile now? Schools of architecture have tremendous responsibility to face this situation and to rethinking the, more or less, fixed profile they expect to create over the past years and to redesign the strategies through which they will assure a competent profile for an unpredictable future.

James Horan

Head, Dublin Institute of Technology, School of Architecture, Dublin, Ireland

Doing more with less time can be interpreted in a number of different ways. Firstly, the most obvious is probably the duration of the time span allotted to Architectural Education. The current practice in most of the Schools within the EU and across greater Europe is to deliver a programme of Architectural Education over five years.

This is common practice, even though the EU Directive (Ref 2005/36/EC) allows for a minimum of four years full-time education for Architecture. This means that it is theoretically possible to design a programme in Architecture, which is only four years long, and for that programme to be compliant with the Directive, and for its qualification to be ultimately listed in Annex V of the Directive. This must seem like a very attractive possibility for those in European politics who pay the Education Bill.

This four-year minimum period goes back to the origins of the Architect's Directive of 1985, (Ref 85/384/EEC.) At the time, the four-year minimum period was agreed, more or less for political reasons, but, Architectural Education continued to be delivered, by most Schools, over five years, as they always had done. At that time, the education of the Architect was a less complicated affair. There were little or no computers, no AutoCad, ArchiCad, Sketch-up or Building Information Modelling. The computer was just beginning to influence business generally. The hugely complex area of energy performance and carbon footprint was in its infancy. With a few exceptions, conservation had not yet been seen as a necessary part of the Architectural Graduate's armoury. The legal framework which surrounds every action and decision of the Architect was a much simpler and less articulated affair. International practice was a rarity, with most architectural education programmes being directed at a local market.

Consequently, in the thirty or so years since the four-year minimum duration was introduced by the Directive, the areas of study, the architectural issues, and the competencies necessary to practice have increased substantially. The education time has remained the same.

During that period we also saw the birth of the Bologna Accord which, although not uniform across all Schools, has resulted in the introduction of a new package for 3rd level education. This is in the form of three plus two plus three years, representing Bachelors, Masters and Doctoral programmes.

While there are notable exceptions, most Schools of Architecture in Europe have opted for this three plus two, Bachelors Masters structure. This automatically signals a comprehensive "buy-in" to a five-year programme of Education.

This position has been endorsed by the Heads of Schools. Exactly ten years ago the Chania Declaration re-iterated the importance of not reducing the period for Architectural Education below five years. This importance is probably due to the belief that the five-year period is as much to do with the time it takes an Architectural student to mature and to reflect, as to the complexity and extent of the subject matter that now constitutes the curriculum.

Secondly, less time could also mean reducing the length of the academic year, thereby delivering a programme in Architectural Education with less contact time between student and formal lecture/studio programme, while retaining the overall five year duration.

Assuming that each academic year consisted of a total of 30 contact weeks (15 per semester) the normal number of contact teaching weeks over five years would be 150. If this were to be reduced by say 20%, the total number of teaching weeks over 5 years would be 120, or 24 weeks per year.

This has advantages and disadvantages. One advantage would be the retaining of the five years, thereby allowing “the appropriate maturing time” for the student of Architecture.

However, 24 contact weeks out of 52 is a very small time indeed and the structure and design of the programme would have to be delivered with an exceptional content, and great efficiency and perhaps a new and different culture to allow the student to function alone during the remainder of the year and build on the learning process in the absence of teaching staff and the support of the School. Needless to say, this type of time reduction might not suit the politicians or the finance ministers, as it does not clearly produce the same level of savings that would be achieved by simply cutting one year out entirely.

Thirdly, less time could mean the introduction of a type of part-time education, where the student could participate while engaging in some type of employment. A model could be developed where the facilities and staff of a School of Architecture could be used to deliver two or more separate educational programmes, each on a half-time basis with some full-time blocks introduced as “anchor” elements throughout the entire process.

There may be other ways to look at the “less time” problem, but, I suspect, that if such measures became a necessity, the answer will not be just a simple matter to cut time, or to cut money, or to cut staff, or to cut resources. It may have to be, and should be, a clever, creative approach to the issues in their totality.

Doing more with less...

Looking at the total picture, the doing more with less in all its aspects will probably require new creative approaches. Instead of reductions, maybe we should be looking at increases, and approaching the problem from a different direction. A few suggestions:

1. Increase the size of the individual Schools so that 25% more graduates can be educated using the same resources. This would retain the current time, the current staff, the current resources and the current finances but it would place real demands on how we should be more creative and inventive with what we currently have.
2. Promote Schools on a more worldwide stage to attract international students in greater numbers, thereby adding to the financial strength of the School.
3. Communicate more clearly, and more regularly, to all concerned, staff/students and other stakeholders, to highlight the difficulties in achieving efficiency. This would make all concerned aware of the problems, and consequently making them more receptive to the measures being undertaken, and engendering more personal involvement and responsibility in making the process work.
4. If cuts and/or reductions become inevitable, maintain a realistic view about the level of any proposed opposition to the reductions. Be vigilant of falling into the trap of investing too much energy into fighting the problem, leaving no energies left to find creative solutions.

No matter how you look at it, in order to do more with less, it will be necessary to be creative. Those involved in Architecture should be better at this than many other disciplines, as creativity and lateral thinking are at the core of what we do.

At a recent cross-disciplinary meeting with a group of people involved in third level education, I had been making the point of the need to be creative in the way we think about how education is delivered and how we can best serve our students. A colleague whose background was more closely associated with Engineering and Mathematics stated that there was no such thing as creativity, that everything was a matter of going through all the possibilities and selecting the best option. By way of demonstrating this position, he stated that it was a well known fact if an unlimited number of monkeys were given an unlimited amount of time sitting in front of an unlimited amount of typewriters, they would ultimately write the entire works of Shakespeare. Of course, statistically or mathematically this must be true. However, I felt it was necessary to point out that even if they were to be given these facilities and this time and even if they were to write the entire works of Shakespeare, they would only write the works that had already been written.

Alexander Wright

Head, University of Bath, School of Architecture, Bath, United Kingdom

Doing more with less time: an English perspective

For the last ten years the ENHSA has maintained a position supporting an increase in the minimum time required for academic study as an Architect. The Chania Declaration of 2001 stated the position as follows: *"The studies leading to the diploma of architecture which gives access to the profession of an architect, should be minimum 5 years or 300 ECTS credit points leading to graduate level ('masters')."*

The past twelve months have seen remarkable changes in the funding environment for many of our higher education institutions (HEIs) and this period of rapid change seems likely to continue for the foreseeable future. In such circumstances flexibility may be the over-riding need in terms of how we respond to changing circumstances and how we continue to design and deliver high quality pathways into the profession. In this context we may need to reconsider the wisdom of increasing minimum statutory requirements as these may have unforeseen consequences, stifling or frustrating our attempts to respond to future unknown circumstances. After ten years, and given the extraordinary changes in that period, it may now be a prudent time to revisit the 2001 declaration with the needs of the next generation in mind.

Much of the recent debate concerning the funding of higher education has focused around balancing the inescapable equation:

$$\text{Teaching budget (public funding + tuition fees)} = \text{number of students} \times \text{cost per student}$$

As public funding for higher education (HE) is reduced in many countries, the consequence for some institutions is that student numbers have been, or will have to be, cut. In order to minimise such cuts there is an imperative to reduce the cost per student, and hence the title of this meeting. However the recent experience in England illustrates a different model and it is this approach which other EU governments may increasingly examine as an alternative.

In England the public funding of the teaching for the majority of programmes will effectively cease entirely from 2012¹. The teaching budget will instead be balanced by a typical 260% rise in tuition fees. For architecture the standard yearly fee will be £9,000 from 2012 (the maximum permissible). In addition the central control on student numbers will be relaxed from 2012 and it is likely recruitment will become increasingly unrestrained for students with high entry qualifications in the years ahead.

What HEIs in England have been struggling to determine in the last nine months since these changes were announced are the consequences for the sector. Architecture schools have been particularly concerned about their future recruitment. Currently in the UK registration requires a minimum of five years of academic study plus a minimum of two years practical

professional experience, with an average period of study being 9.5 years in total². Although in future students will have access to loans to cover their tuition and basic living costs, these loans will be subject to interest payable at a rate equal to the retail prices index (RPI) measure of inflation, rising to RPI+3% for higher earners. Repayments will be based on 9% of income above a threshold of £21,000/year, with outstanding debts written off after 30 years. The question for potential students therefore arises as to whether their potential earnings will compensate them for the cost of their education?

Recent newspaper articles suggest potential earnings for architects are only £34-42,000/year compared to twice to four times that amount for professions requiring a similar length of education such as medicine, dentistry or law³. The UK's Office of National Statistics (ONS) provides historical data on earnings by profession. In 2010 the ONS's median earnings figure for Architects was only £36,886⁴. This is below the figure for that of policemen, train drivers, lecturers and well below that for all the professions requiring extended periods of study.

Based on these earning figures it is possible to plot the debt profile of students entering English universities in 2012. For these students, who may be assumed to earn the median salary from graduation, the results show that for the thirty years following graduation their annual repayments never exceed the annual interest on their debt. This is based on an historically reasonable RPI projection of 3.5%.

If one assumes a graduate starts on a current average initial salary of £23,000⁵, with 5% annual pay rises, the accumulated debt after 30 years is £274,000. It would take an annual pay increase of 10% per year for 30 years in order to repay the debt and even then the debt would only start falling after 21 years of work.

Currently the projections are that UK student debt will reach £75 billion by 2016. There is a wide range of estimates with regard to how much of this debt will be written-off after the thirty year limit. The Government estimate the percentage to be 30%, whilst other sources quote as much as 55% will never be repaid. If these higher estimates prove accurate it may well necessitate the terms of the loan repayment to be revisited by a future government, placing even greater financial burdens on graduates. In short, although presented as a graduate loan system, for the vast majority of students the system will effectively present a form of a graduate tax.

The implications for English schools of architecture are uncertain. It appears that some may be able to, and wish to, expand and become relatively better funded. In so doing these elite institutions will attract a higher proportion of the best qualified applicants. Some other schools appear to be likely to come under unsustainable financial pressures and some programmes in architecture appear likely to close. For most, survival will depend on increasing their share of a shrinking application pool.

Demographic projections for the UK show that for the next twenty years there will be a fall in the number of English 18 year olds of approximately 10%⁶. Currently Architecture accounts for less than 1% of all HE entrants, and this proportion fell last year⁷. In order to compete with other disciplines architecture may need to consider new flexible pathways into the profession and even consider shorter pathways for students with proven ability. In this context the question

arises as to what the benefits are of setting a minimum period of study within the Professional Qualification Directive (PDQ)? What is a suitable minimum time? How should practical experience be valued within any time requirement? Are minimum standards actually about setting minimum standards of demonstrable competency, or arbitrary years of study? Is time spent in academic study a predictor of competency?

With regard to this last question I can report on some analysis carried out by my institution. We considered the ability to create coherent architectural designs across three sequential year groups. In each year group we found a range of competencies across the marking range from 32% and failing to 88% with a relatively normal distribution in each year. This variation is despite the students entering the programme with very similar entry standards and being subject to identical taught components. In assessing a Part 1⁸ passing threshold standard in the final year (40%) we found this correlated with 64% in the previous semester of study and 88% in the semester prior to that. In short the results were perhaps unsurprising. Within each cohort there was a wide range in competency and whereas some students may take four years to reach a Part 1 passing standard, many others can do so in less time. In my institution we arguably only accept onto our Part 2⁹ programme those students who have already demonstrated a threshold passing standard through their previous studies. The question therefore arises as to whether it is an ethical position to require students capable of meeting the required standard of competency in less than 5 years of academic study to have to assume a prolonged period of education, and assume the personal debt associated with it, in order to meet an arbitrary time requirement?

According to a survey of existing architecture students in the UK in 2011 the average total cost of their education was £88,726¹⁰. This is the figure prior to the 260% rise in tuition fees. If an arbitrary five year minimum is imposed through the PDQ, will architecture school increasingly become a playground for the rich? The key question is perhaps, who benefits from moving to a five year minimum? Students arguably don't benefit as the increased minimum duration of study could create an additional, unnecessary debt burden. The Architectural profession in the UK would arguably also not benefit from increasing the duration of study as this could restrict access to the profession based on independent wealth, at a time when the RIBA has pledged itself to widening participation. Perhaps most importantly the public could not be seen to benefit from any change. The competency standards specified in the eleven criteria included within Article 46 of the Mutual Recognition of Professional Qualifications Directive (2005/36/EC) are what ensure professional standards. Additional academic time could simply be seen as creating additional cost for the tax payer, either through education subsidies or, in case of the UK, through the increase in the proportion of written off debt. Finally schools of Architecture in the long term could also be seen to suffer from any increase, as this would limit their flexibility in creating high quality programmes capable of attracting a larger proportion of total HE applicants.

In summary for English Architecture schools maintaining a four year minimum, or even eliminating the time requirement entirely arguably allows; more flexibility, more part-time pathways, more earning and learning, more use of the calendar year, more widening participation and more chance of survival! In today's context it might also be worth reflecting on the effect of

these UK changes on EU students. Historically about 15% of English cohorts have consisted of students from other EU states. From 2012 these students will be subject to the new English fee regime and as a consequence studying in England is likely to become prohibitively expensive for a significant proportion of them. The number of EU students studying in England therefore seems likely to fall. The number of English students wishing to study in continental Europe has traditionally been vanishingly small. There are already signs that this number is likely to increase¹¹. For English Schools of Architecture both these factors will place additional stresses on recruitment. However from the UK's position the Government may not be unduly concerned. The vast majority of EU students that came to the UK to study return to their home country to work, creating little direct future benefit to the UK economy. The same is likely to be true for English students in the future studying in continental Europe. Whereas the UK taxpayer could be seen to have been subsidising the architectural education of a large number of EU students in the past, in the future the balance of subsidy is likely to be reversed. It will be interesting to see how long, and to what extent, the taxpayers of other nation states are prepared to subsidise the education of England's architectural profession.

In the course of these proceedings I have been struck by several comments and I would like to quote two by means of conclusion, both by Marvin Malecha:

"I want to see more architects, not less."

"If the dream is to fly... then what's important is that you keep on flying!"

Notes

- 1 Department for Business Innovation and Skills "Higher Education: Students at the Heart of the System" 2011, available at: <http://c561635.r35.cf2.rackcdn.com/11-944-WP-students-at-heart.pdf>
- 2 The average period to registration was provided by Pam Cole during her presentation to the SCHOSA Conference in Cambridge, 14th April 2011.
- 3 The information was presented in an article entitled "Mapping a path to your chosen career" in The Times on 28th March 2011 available at: <http://www.thetimes.co.uk/tto/education/article2963658.ece>
- 4 The summary is taken from the statistics provided by Office of National Statistics for median earnings in 2010 ranked by profession/job title.
- 5 The £23k starting salary for Part 2 graduates was taken from the lower range for London graduates as provided at: <http://www.ribaappointments.com/Salary-Guide.aspx>
- 6 These are approximate projections based on UN population forecasts.
- 7 See UCAS statistics available at: http://www.ucas.com/about_us/stat_services/stats_online/annual_datasets_to_download/
- 8 A UK Part 1 qualification is typically a three year undergraduate programme in architecture.
- 9 A UK Part 2 qualification is typical a two year Master of Architecture completed after an undergraduate degree and a year's professional practical experience.
- 10 The survey was carried out by two recent graduates and was the result of 1300 responses. It was report in the Architects' Journal on 26th May 2011 (page 6) available at: <http://www.architectsjournal.co.uk/news/daily-news/survey-cost-of-studying-architecture-to-hit-88k/8615263.article>
- 11 See Elizabeth Hopkirk's article entitled, "Students ditch UK schools to go abroad" which appeared in Building Design Magazine on 22 July 2011 available at: <http://www.bdonline.co.uk/news/analysis/students-ditch-uk-schools-to-go-abroad/5021920.article>

Sven Felding

Rector, Royal Academy of Fine Arts, School of Architecture, Copenhagen, Denmark

First of all, I would like to thank the conference organisers for adding such urgent issues as 'education under pressure' to the agenda for the conference, and thank you for offering me a seat on the panel.

I represent one of two architectural programmes in Denmark, the Royal Danish Academy of Fine Arts School of Architecture in Copenhagen, which merged with Denmark's Design School and the School of Conservation earlier this year.

To put things into perspective, I should mention that Denmark has 5.5 million inhabitants. We have about 10,000 practising architects, and some 1600 architectural students attend the two schools of architecture in Aarhus and Copenhagen, respectively.

Naturally, the seminar's theme, 'Doing More with Less Time' is also of relevance to Danish educational programmes, although it is a general political target that 60 % of the youth of any given year should have an education, and 25 % of the year's youth should have a university education.

This means that although all government institutions are under pressure to become more efficient, there is a political will in Denmark to give financial priority to research and education, including at the schools of architecture.

So, in Denmark we also need to educate more efficiently without lowering quality, and as everybody else, we have to be very cost-conscious in the coming years.

First, we need to ensure that the research and education facilities at our disposal are utilised efficiently: Are we energy-efficient? Do we make use of every square metre? Do we make use of all workshop machinery? Do we have the service level that we can afford?

The next step in our financial considerations is to ask ourselves whether we have the right composition of school staff in terms of researchers, teachers and administrative personnel, and whether we have structured the school's staff with a focus on collaboration and flexibility.

The final step is then to consider whether in the actual teaching, we can 'do more with less time'. In other words: Can the number of hours per student be reduced without this having a detrimental effect to the quality of the architectural programme?

The architectural programme in Denmark, like most architectural programmes in Europe, is based on three quite accurately phrased documents: The UIA/UNESCO Charter for Architectural Education; EU's Directive on the Recognition of Professional Qualifications and the recommendations of the Bologna Process. Thus, the general guidelines have been established for the content of the programme (the 11 items in the EU Directive's Section 46 and the Bologna Process' learning objective descriptions for higher educational programmes), for the extent of the programme (the Bologna Process' 3+2 model, the ECTS point structure and the EU Directive's minimum requirements) and finally, for the Danish legal requirements that the architectural degree programme must be based on research and artistic development work.

All in all, we must conclude that the general and quite demanding framework has already been established, so the question about 'doing more with less time' ends up as the question 'can we teach more efficiently?' As in every other architectural degree programme across the world, teaching at the schools of architecture in Denmark is a case of interplay between knowledge building through lectures and independent studies and skills building through sketching assignments and project exercises in studios and workshops.

This means that there is a close dialogue and guidance between teacher and student, and the question is whether this dialogue can be developed. At the Danish schools of architecture, we have made contact with one of the Danish universities' research institutes on didactics, and over the last couple of years, we have collaborated with researchers from this institute to develop a training course for teachers of architecture, which addresses issues related to drawing board teaching (the traditional direct apprenticeship), group teaching and the relationship with student tutors. We have also looked at the individual or group-based critique form, which is common practice in the architectural programme.

The pedagogical course runs over six months, during which a young and a more experienced teacher complete the course as a student/tutor pair. We have completed the first course and are now running the second course with a large number of enthusiastic participants.

It is probably a little too soon to determine whether efficiency will increase in any measurable way, but it is widely recognised that the course is experienced as a qualitative improvement, and so far, it has been an investment in more efficient and focused teaching at all study levels.

This is not our only initiative as we work towards increasing the focus of the architectural programme. Two years ago, we launched a process at the Royal Danish Academy of Fine Arts School of Architecture with representation from our young researchers, our teachers and private practice. The objective was to outline the framework for a strategic development plan for the architectural degree programme at the School of Architecture for the next seven years.

The proposals put forward by the team have been discussed with the School's students, teachers and other staff at meetings and during workshops, and subsequently, they have been revised and rewritten into a mission statement and a strategic development plan, Plan 2017, for the complete development of the School. Plan 2017's main statement is that the Royal Danish Academy of Fine Arts School of Architecture is to continue to be characterised by great academic diversity, 'insisting on diversity'; that the School of Architecture must stay abreast with the architectural production process, 'fabricating spaces', and that the School of Architecture must focus its attention on society and developments in society, 'creating connections'.

The main content of the Plan in today's context is closer integration between the School's architectural research, especially the Master's programme where the students are directly involved in research and development processes at the highest level.

In conclusion I would like to mention that we are currently working on organising a planned and focused recruitment and employment plan, which will include a career development plan for the individual employee. We are also working intensively on the development of a complete quality assurance programme, both for the degree programme and for research, and finally,

we are working to create closer relations to the architectural profession in all its vast diversity. We have taken the first steps towards fulfilling our strategy plan, and we are very optimistic. Together, these initiatives represent the Royal Danish Academy of Fine Arts School of Architecture's proposal for the creation of an architectural degree programme that is open to society's requirements and changes and sturdy enough to face the financial challenges of our day and age.

Debate

Constantin Spirionidis, Greece

I hope that it was an interesting introduction because it brought to the fore several extremities. To tell the truth, when designing this session, the idea that was behind it was that the duration of studies would appear as something more homogenous and going towards the definition of a certain duration. It is interesting that we have at the one extreme, a duration of five years and at the other, the four years as a kind of proposal and in the middle an aim for flexibility. This is something interesting that appears in front of us; I am very keen to hear people's views on these different positions and options.

Michael Eden, Sweden

I would like to say that I am very much in agreement with James Horan that maturity and the time for reflection is very important. We can never know when the right moment comes and when it will come. The prerequisite is that you must work a lot to get this moment when you suddenly realise what it is all about. I have two questions. The first is more concrete: how many of the countries in Europe have a license for architects? That is, when do you have this compulsory postgraduate education, because I think it is very uneven. My other question is, none of the speakers mentioned the opportunities for schools to educate practising architects in some kind of lifelong learning perspective. We have talked here a great deal about lifelong learning; we take it as a matter of time and we cannot have more time in our life.

James Horan, Ireland

While I cannot put it as precise an answer as your question as to the number of countries, the information that we have is that at least twenty-two of the twenty-seven member states of the European Union have some form of required professional experience after leaving the educational process in the School of Architecture. That type of postgraduate experience varies from one year to three years. In Poland, for example, I know that it is three years. I can talk just for a minute about the Irish situation which I am clear about. Two years of postgraduate experience are required in Ireland. That is a legal requirement because the title of architect is now a protected title; there is a legal document that describes this. It is what is called the Building Control Act which deals with buildings and construction and who is entitled to say they are an architect. It is the competent authority who decides on what is necessary for someone to be entitled to be called an architect. The way it is structured at the moment is that you must be a graduate of a recognised School of Architecture, you must have at least two years experience in practice, you must attend a series of practice lectures, you must carry out a case study, you must pass an examination and probably attend an interview. Only after that process are you entitled to be called an architect. There are other rules by which people can get to this point but I am not going to go into the details of those now. Certainly across the European Union,

however, twenty-two of the twenty-seven member states have some additional requirement, but no two of them are, I think, identical.

Selma Harrington, ACE

I would just like to add something to that. I can say that we in the ACE do a sector study every two years. It is largely done by questionnaires; it addresses the issues of how the practices are conducted and what the workload and the size is and so forth. I would say now to organisations that perhaps we are identifying the gap in the knowledge which can be enriched and so eventually finding the way to answer your question about what the practice is. I suppose one can also legitimately say why do we insist on having the professional aspect of experience as a prerequisite to entering the profession and who does that protect? That ties in with protecting the future practitioner, the future market, the client and the consumer. It could also be possible in a way to point self-serving to the providers or to the ones that organise how that practice should be. Certainly, I think we have provoked a discussion. I will make a note of the gap and I will seek your help with a presentation or a form of a discussion between us to direct our sector study which is due to be done next year to cover this type of question as well. This will then give all of us a better tool to see each side of the architectural perspective from architectural practice to architectural education to improve them.

James Horan, Ireland

There is one further point that may be worth noting. The Qualifications' Directive involves notification of what is necessary to practice. This was not the case with the Architects' Directive. It is therefore extremely important that in the legal framework of architecture in the European Union, the commission is asking member states to tell the commission formally, so it can be included in Annex 5 by what is necessary to access the profession and not just what has been necessary to graduate from the School of Architecture. That difference is hugely important because it does not allow the separation of these two events in the way it was treated in the past.

Constantin Spirionidis, Spiridonidis

Before giving the floor to others, I would like to say to Selma that of course we would very much like to collaborate in order to run this new mapping, because we do it from time to time but since the conditions change very fast, it is time to do it again. The condition, in order to be able to have this information, is for the participants in this event to answer the questionnaires. I do not want to continue moaning because I do the same thing every year concerning this aspect, several times I have tried to do this, we sent the questionnaires and we did not receive the respect that we expected. This is why I think that it is necessary to stress this: information is crucial to complement our decision-making. Because this project can produce this kind of information which is necessary, in case we go for that, which I strongly suggest we do, then we must seek your tolerance to answer the questionnaire in order to give us the possibility of obtaining this information.

Manuel Nicolau Brandao, Portugal

Thank you very much, because what most of the staff express and what I would express was answered to some extent by you and by James Horan in this last discussion. I think the relevant point that is usually not mentioned when we talk about four, five or even six years, is that what is important before choosing the exact number of years - something which is arbitrary, according to the experience of each school and of each country - is the question of what there is before and what there is after. By before, I mean what is in our high schools. How you start to approach the subject of architecture? Nobody wants to discuss it, most of all the governments of countries. That is first of all. Secondly, when I say "after", it is not between the schools and this strange one or two years, it is the professional responsibility. Professional responsibility is what has to be taught in schools. There are countries where the details in buildings, for example, are not within the remit of the architect. In the schools in those countries, therefore, the professors do not have to teach it. However, in Portugal, for instance, we have full responsibility, so we have to spend time teaching the students, putting them on the building site and so forth in order to understand this. Yet nobody ever wants to discuss this either! Now we are saying that, for example, there should be two years' practice, but in Portugal, the project can be signed with the responsibility of an engineer that has had not one single month of practice! So why take studies in architecture? There is no point in doing so. Students can study until the third or fourth year in architecture and then change to a Faculty of Engineering. That is why in Portugal we have almost three Schools of Engineering that now have a small Department of Architecture. They are clever. We have this in official universities, because they are not stupid. Therefore, if the laws that James Horan was talking about are not demanded by the European commission, all we are talking about is nothing. It really means nothing! I come from a school where we do not have grants from the government; we never have had. We operate by fees, we are a non-profit organisation, so we only have fees from students so this issue never concerned us. Perhaps for this reason we have a different point of view. We also tried to build with professional organisations and the Professional Institute of Architects, and to build exactly what we can stop teaching in school to reduce the number of years spent on studies in school, at least by one year. We asked what we could do together. We can leave out things about legal right and so forth; this we can leave to a professional organisation. However, that kind of teaching that they have through the Institute of Architects in Portugal, it is not similar if we only have two years of professional practice. What does it mean? In Portugal, it is simple: just one word, as Constantin said, it is slippery. It is not good to bury our heads in the sand. Otherwise, it will be exactly the same in two years' time. We have students who study for free and we have students paying the architects to have a paper or a report and that I cannot support. It is incredible! I am absolutely against it. You have the rules to write about it and very strong, or otherwise, I am not for it.

Spyros Raftopoulos, Greece

Hearing Alexander Wright's presentation and analysis about studying architecture in Britain as from next year, I wonder if you will find students any more because this sounds incredible! If your analysis is true, I would be surprised if you ever have any more students

to study architecture! That was simply my reaction on listening to that presentation. The other point I would like to make is that we are talking about the duration of the studies and we are talking about - we more or less all agree - the five-year period, whether this the three plus two continues or whether it is just five years. Nevertheless, I would like to hear from people whether this is just a nominal duration of studies or an actual duration. What I mean by that is not only the nominal situation, but the real one. In our country at least - and talking about my school in Athens - the time nominated is five years but the actual duration of the studies is slightly over six and a half years. Which means what? Going back on Selma's and the ACE's proposal? If we actually see the real time that people study, it may be, as in our case, six and a half years, six and a half plus: we have certain periods for several reasons that makes the average study reach seven years, but that is an extreme case. If you add on the other two years of practical experience, and also a case, which applies in Greece for the males who have at least one year of national service, all this means that it adds up to almost ten years. This is a very long time to wait to be able to practice architecture. It means that people will be almost thirty years old before they are able to practice architecture. Even though this does not apply to our country, I personally agree that there should be at least one year of practical experience. I do not know whether official bodies would accept that: I am talking about the union of engineers and architects. Nevertheless, I feel that we should be a little more pragmatic about the present situation. Changing the subject slightly, I would like to say that overall, I think that architecture cannot be compressed. In that sense, I agree with what James Horan said in his presentation. One of the reasons for the duration of studies reaching six and a half years as it has in Greece is exactly that: the time which the people need in order to mature and to be able to produce the designs. Design is something which needs time. As architects, we all know this. It is not a discipline where you study, you read books, you sit exams and that is it. You may find people who do not produce a project for a whole semester because they are not mature enough to do so; they need more time. I think we have to include all these elements in the discussion. We are academics and we may propose things but let us not forget that we are part of the society, which spends money on studies, the cost of which is very high. This is especially true of those countries, which have a high level of debt, such as Greece, and where it is necessary to reduce the cost of education as far as possible and definitely of the higher education that we expect. Thank you for your time.

Francis Nordemann, France

This is not a question; it is more some sort of comment referring to what we are pushing forward with the EAAE is not a profession but it is often at the mercy of fashions. There is the romantic view of the architect referring to a Frank Lloyd Wright in a famous movie; this is something, but this is not the only way to be an architect. Architecture offers things to many professions. It is not simply the same as when you learn to be an accountant, you go directly into a profession. In a similar way to studying architecture, when you learn literature, you will not necessarily become a novelist. There are many things someone can do afterwards. When you are an architect, you can become a professional client, possibly for investors, developers,

you can become a developer yourself, without being an architect and practising architecture. You can be very efficient and important within architecture by being a civil servant, in being a political lobbyist or involved in politics. It is very important that we have such people who are accomplices of ours sharing the same values, the same culture, and who have had the same education. I think it is very important not to lower the number of students in our schools in order that we become even stronger and even more powerful because of this access to different professions. In addition to this, I would like to give some information. I do not have right now the exact numbers of the professions most in demand, which existed in the year 2000. Most of the professions being offered today did not exist back then in the terms we had. Even the traditional profession of architect has changed due to Autocad or whatever tools and new terms we are using, that is one thing, but there are also many new professions that can be accessed and even promoted by architects.

Ramon Sastre, Spain

Today we were speaking about the time for education, and now in our debate, about the time for practice. What is the time in education for? The time of education is in order to get the competences, but what is practice for? It is impossible to structure these practices. We can see all the professions, they have the time to learn. For drivers, they have the time to learn and then they practice by driving. In the case of pilots, they first take a small plane, then maybe a jet, then a turbo. But we have apprentices for two or three years, what for? At the end, these architects can make a very big building in a city, in New York, probably the practice is going on, and indeed in some cases, you can just limit the size or the level or of the importance of the thing being done. Yet I find it very difficult. I do not mind the time of practice. What bothers me is the question of how, which is a different thing. Maybe because I come from a country where there is no practice, there are very long studies, but with no practice and you make the biggest buildings in the world when you have finished.

Michael Eden, Sweden

I apologise for putting two questions at the same time, but the second one was taken up here. You cannot compare public and private education, but I was wondering how it can be extended and what opportunities that will give the schools.

Herman Neuckermans, Belgium

I found the presentation by Alexander Wright from Bath very revealing because I suspect what has happened in the UK will have a strong influence on what happens on the continent in the rest of Europe. If I were a student in the UK, then naturally I would fly away and go somewhere else to another place in Europe where studies are funded. Do you see something like that happening? Or, because the education in the UK is so specific, so much better, does this make students stay? Then they have the burden of this loan-paying scheme for seven years. This is my question for Alexander Wright.

Rita Pinto de Freitas, Spain

I also want to refer to Alexander's presentation. I have a question and would like to extend it to the rest of the (...) I think it was quite impressive and frightening for all of us. We need in some way to reflect a reality that is common to many countries and departments to bring down the level and intensity of the bill of the education of an architect and about the recognised social value of this building, of this education. I wanted to ask you something about your talk which was about decreasing the length, the intensity, the amount of time of the education that is also decreasing the quality of the education to increase the potential incomes. Did you not think about increasing the potential incomes of the architects? Yesterday we talked about the new definition of architect. I would say that perhaps we will need a more precise definition of the architect that is better linked with all the strengths. This is problem in education which is not known or recognised enough by society or by the politicians. There are many other things we can do but I was also wondering if you had thought about it.

Manuel da Costa, Portugal

I would just like to say a few words about contradictions after listening to what was said and what inspired me by the panel. The first thing is that I run a fairground for the poor. In fact, as I said yesterday, we have grants from the State. They must pay about 1,000 euros a year and some of them were not able to pay that this year. This should be a problem. But then I think about gastronomy. I think of Alentejo, the driest part of Portugal where people live off agriculture. To eat in the fields they use water and olive oil, some herbs, one egg, a little bit of cod fish and from that is created a very good dish that nowadays has become popular. It has a richness, the richness that comes out of poorness. I would daresay that in English gastronomy is the poorness of richness! I had a teacher that used to say at 35 years old, a football player dies and an architect is born. What this means of course is that we need maturation time to prepare an architect and that part I think also belongs not to the profession itself but also to the school. So for me, I think five years is a minimum.

Constantin Spirionidis, Greece

We will hear another opinion and then I would like to give the panel a chance to respond to what has been said before starting another round of questions.

Adalberto Dal Bo, Italy

Regarding the duration of studies, I agree with James Horan's position. My question is about the arguments we heard yesterday. I would like to know from ACE the feelings in the professional organisations, what the position is in relation to applied research in the schools about design research in school, that is, about the work you can do in the school for municipalities, for cities and so on. I understand that it is some problem of concurrency.

Art Oxenar, The Netherlands

There was also the possibility of some good news - thank you for opening a positive way of looking at it. Less can be more. I have often explained that the model we use by combining working in practice with doing academic work is a four year Master's programme. That is an interesting way, it is the same 120 ECTS points academically but not done in two years, done in four years. It combines two years, we have 120 ECTS points but there can also be formal qualifications given by the state for working practice. That opens the possibility not only of having this ripening process and of having time for it, and with a comparatively enormous amount of prizes in the yearly competition for graduation work, because you have more time to write it, but it also gives students the possibility quite simply to earn some money. While studying, they have contracts in offices and they work as designers, assistant designers, project leaders, even as beginner architects within the offices. This is therefore a way for students to finance their studies. Of course, we do now have a practical problem there, which is the market. In a way, that also brings us back to point of how many students we should train. That is an open discussion, which is yet to be opened here. Yet this situation does put it on the table very clearly: how many of those students are directly marketable? But I am happy to see that within this discussion, we are opening up towards our models of how to do a Master's and in that sense, I was happy to hear from the presentation from ACE that the Green Paper says this period of professional practice is cited as a Master's degree complemented by a period of professional practice. I think that is indeed the way to formulate it. It moves towards the possibility of all kinds of combinations of working in practice and doing academic work, so I sincerely hope we discuss this idea. To follow by formulation of ACE is not your intention, and then we will agree on ACE supporting that position. You will understand that from this whole point of view, I would very much support the idea of three plus two plus two, as long as we are open towards all kinds of new openings which can combine learning in school with learning in practice.

Alexander Wright, United Kingdom

There were some questions addressed towards the presentation I gave earlier; I am grateful to have the opportunity of correcting any false impressions I might have given. I should first of all say that UK architectural education is not in favour of what has been imposed on us. A year ago we would have said it was unthinkable but I think it is a warning that in the current circumstances how much can change in a year. In no way are we advocates of this system, it was almost giving us some warning of what might happen. I had some concerns about my colleague from Denmark who was on the verge of an election. You have to be very careful what can happen in the three months after an election. Manifestos are no guide! I should also tackle some of the questions that were raised directly. I think that we are worried about all our students going into Europe, and certainly we have some concerns about that, to put it mildly. We know that many European schools are absolutely excellent; there are many which employ English tutors who teach in English; we know your fees are very much lower than ours are able to be so we will have to wait and see what happens there. Currently about 15% on average of our intake is from the EU and we are very worried about what will happen if that 15% of students from the EU who do come to Britain stop coming; we also wonder and are very worried about how many of our students who

typically have not studied very much in continental Europe will choose to do so. So that is of great concern to us. As the questioner asked: will we have any students next year? I think part two graduate programmes are particularly vulnerable. I think part one students will generally be less inclined to take the continental European route but I suspect that this will not necessarily be the case for too much longer. We are also worried about that. I should also place that in some context: our students are currently paying £3350, so this is actually an increase of 260% in their current fee level. There has been some move by the government to try and sell this as a "positive thing" for students in as much as the threshold at which they will start paying back the loan has been raised from £15,000 to £21,000 a year. Of course, all the money is not payable up front. The students incur no debt: it is free access to the education, they pay later. So we have people being modeling it, people that have been guessing. The last I heard - this was actually done by an insurance company worried about the effect on their student rental housing - was that we might lose up to 40% but the numbers are guesswork. I should also just point out something in case it is not abundantly clear and I hesitate before doing so, but if our students choose to study in continental Europe, and they choose to come to the northern European English-speaking programmes in greater numbers, in all likelihood, those students will return to the UK to practice, even if they have to go through some additional gateway qualification in order to practice architecture in the UK. What will effectively happen in those circumstances is that European countries will finance the education of English architects. What I therefore wonder is to what extent our government is particularly worried about that scenario. I hope to address all the points in turn. I would also like to say something about placement and professional practice experience. We have a lot of professional practice experience that is very tightly controlled, it is very well-regulated and in various ways it is actually quite well linked to academia. There is not a complete split: in the UK, there is a very tight integration between professional placement learning and academic learning. The placements occur throughout the period of study, not at the end. The period of reflection, which I agree is completely essential in the development of an architect, occurs some time in the fact that our students might go out for two years' training before they actually get to Master's level. That period of reflection and maturity therefore occurs during the educational process. I should also say that in the UK we are not actually talking about shortening. I do not want to advocate that we go for four years, or shortening. We are not shortening the UK. In the law in the UK it still takes seven and half years as a gateway journey to the profession and we are still saying that will be the same. We are saying that what we want is potentially the flexibility to change the relationship between academia and practice, to change the way we define academic time and potential practice learning time, but actually the time from when an eighteen-year-old starts on their qualification, the minimum period in the UK will still be seven and a half years. What we are talking about is whether we should use the statutory instrument of the law to set a minimum five year academic training. The UK position is just in and I find myself as an advocate here and I do not mean to be - but the UK position is that using the law in that regard, the law that might not change for ten or fifteen or twenty years, we could actually talk about a minimum. The norm in the UK could be seven and a half years, but we have to allow ourselves some flexibility to cope with the situation; the UK has become a completely transformed environment.

Sven Felding, Denmark

I would like to make just a short comment which has to do with a few countries in Europe that have no legislation on architectural work. It is not a completely open field. First of all, architectural education in these countries and some of the Nordic countries and some of Denmark. The education is of course notified in Brussels and in the Schools of Education in Denmark. The next thing is that when you want to practice in the field of architecture in my country, the insurance companies are a gateway to the profession. You are not able to have the proper insurance for your responsibility as a professional architect without having your completed education behind you and without having all the skills necessary to practice as an architect. So do not be afraid to have a Danish architect in your countries! If we need to cross a border, I can assure you we are competent.

Constantin Spirionidis, Greece

I would like to make a comment about the two issues that were discussed. The first is this famous maturation. If someone were in this room without knowing anything about architectural education, he might conclude that education of an architect takes one year because the period of four years is not good because of maturation, whereas the five years are okay, but this means that one year is enough to help obtain the maturity that is expected. I am not sure if this can be a real argument, because if this situation is just one year, then I am afraid that the wine would still remain cheap wine and as James Horan says, life is too short to drink cheap wine! Then the life of the client is too short as well for you to use a "cheap maturation" as an architect. Thus I do not really believe that the maturation time is something that has to define our educational strategy. On the contrary, all of you have experienced this in student workshops which take place for only seven days. They produce extremely interesting results, which are much better, much more creative and much more efficient compared to the results that come from the one semester. This is my experience at least; this possibly happens only in my school and may have more to do with the quality of the students that we have, although I do not believe this. What does this mean? It means that there is a problem in the way that we are teaching. If, for example, a student in a week has a studio course every Tuesday and in the meantime, another two or three students have studio courses or other things and after one week s/he comes again to the same studio and then again after one week, then this time management will probably cause a separation in the way the student is thinking. Thus the efficiency is not as was expected in the beginning. I think therefore that there are significant possibilities of ameliorating the way that we are teaching architectural design or, put in more general terms, the way that we are teaching creation. This is something that we never discuss and which remains obscure in the discussions we have. If you think that in most cases creation is taught by giving a theme, sending the student home in order for him to think up something, after which s/he returns with the proposal. Then the tutor suggests some changes in the manner of the process of parking - right a bit, left a bit! The student goes away again and goes home, s/he tries to do the correction, s/he comes back and there is the same process. Thus the teaching practice in most cases seems to me to be the way that we are teaching. This is not a problem of maturation but a problem in the teaching approach regarding this particular problem of teaching creativity. On the other hand, according to my understanding of it, if maturation is not the issue, then should we go for the four years? My

answer is definitely not. My argument for that is not on the basis of the maturation as such, but based on the fact that over the years, architecture progressively has abolished some fields which were essential in architectural education and in architectural thinking. First, for example, the city. It tends to escape from its architectural studies. The interior design is already out. There are other disciplines that someone could find in that curriculum which are escaping and as those things are going out, then there is room to think that we can compress the duration of studies. I strongly believe that we have to keep these subject areas in the curriculum and to enable the students to be ready in a market - as someone said: what market? - which is now unpredictable. This unpredictability is the reason to keep the five years. It would be in order to open up many possibilities for the architects, not necessarily to go deeper, but to prepare the ground on which the lifelong learning perspective and the different subject areas or themes of activities and thinking could be developed. For this reason we have to keep the five years and to intensify our teaching approaches, or to systematise them, in order to achieve a broader perspective on what architectural thinking and doing is. The second point I would like to make is related to what Spiros Raftopoulos mentioned, concerning whether the time given is a nominal time, or if it is the real one. I think that the European framework in its formulation of the recent population gives us this answer with the ECTS credits. An ECTS credit needs time. It is time that someone has to spend. This is a precise time based upon the concept that a student like all working people has eight hours to work, eight hours to sleep and eight hours free time which is, I think, reasonable. The only intensification is that the ECTS system asks the students to work eight hours on Saturdays as well. This is the 300 credits during the five years. Thus, if we design our courses in a way that a student will work only eight hours and not design the courses in a way that a student has to design for 16 or 17 hours, from morning till night, then there will be no need to prolong the duration of the studies. It will be efficient to finish the exercises and the modules within the duration of time imposed by the number of credits. If, for example, a course has four credits, it means that there is enough working time for the student in the classroom or at home. If the design of our courses takes this into account, then we can talk about five years and these five years will be a real five years and not simply a nominal amount of time. I am afraid, not to say I am sure, that very few Schools of Architecture in Europe today apply this system correctly. I also think that it is an opportunity to think about applying this system because this will give us the possibility to better collaborate among us. A course of two credits would be the same time-wise and effort-wise with another two credits in another institution; this is something extremely important for our contacts, for our cooperation, for our exchange and for our experience.

Selma Harrington, ACE

I shall try to be concise and also to use my creativity and resourcefulness. There were a couple of questions that related quite specifically to the position of the ACE, either in the form of a comment, or as a direct question, and in regard to professional practice experience that we were discussing today. I think there was a Portuguese view and a strong feeling that this period of professional practice experience should not be an exploitative period in life of the young candidate. There is no way that ACE is advocating such a position. We are not talking about internship for free. There are conditions to be put on that; it

has to be understood as a period of apprenticeship: it is a support to an architect who will register to work independently to be licensed, to be fully in a position to be responsible on the market. It is designed to be that support within that period. Once again, I speak a little from the Irish perspective, knowing how our government, together with the Office of Public Work, has designed the scheme which has a full structure within this two-year period. It guides an architect under the conditions of fully paid employment through the process of acquiring necessary knowledge and experience to allow the candidate then to complete the verification process to the professional practice exam and then register. I would say that this is a specific experience in a specific country; there is a slight contrast with countries that have no requirement, such as Spain or Italy, where as far as I know, the candidate has an eight-hour exam in doing a drawing and answering some questions and that is the only prerequisite for registration. The ACE is looking at the discrepancy in these practices and is advocating that there should be a period of professional practice. It is of course up to us architects to fight against exploitation. There was a question about the opportunities for schools and that may be the way to look at this. What can schools do? Again, I know that some schools are taking leadership and taking over from professional bodies which have traditionally in some countries administered this process of verifying practice and registration. Thus, some of the schools have prepared teaching programmes and modules that allow students to combine academic and professional experience. That is perhaps similar to the Master's that my Dutch colleague was talking about where, through their programme of two years of Master's after the full and maybe longer Bachelor's than in other countries, the candidate concurrently has part-time work experience combined with academic tutoring. Models are therefore different. What the ACE is aspiring to do is to set up minimum standards that are agreeable to our membership across the board. It has to be remembered that that our membership is made up of professional bodies and chambers of architects that sometimes have separate functions of registering. I think that answers that point.

There is another small point that I wanted to make. In general, many of you are talking and you are more knowledgeable than me, about the impact of this mobility achieved through the credits system. I would say that mobility of students has been achieved largely across Europe through the credits system in education. We are discussing and examining at mobility and the impact of mobility on the profession. One of the statistics from our sector study from 2010 is that, in reality, the mobility amongst practitioners is relatively low and the problems resulting in access to different markets are relatively low. According to the responses that we have in our sector study from all the countries - it seems that only 4% mobility applies across Europe. That is low and it says something. On the other hand, if you look more broadly even at the jargon that comes from commissions on European development in different documents, mobility in four aspects, remains as a dream of commissioner (...) in his lifetime: mobility of goods, services, capital and people, or labour. In our sector, it seems that this mobility is the least appropriate: money. But the capital moves the fastest. Yet what is the impact? Another term in the documents is flex-security. Mobility implies flexibility to a certain extent but it also implies a certain amount of instability. The impact of mobility on communities has to be analysed; this has possibly not been discussed broadly enough. So there is another term that appears in the documents, in the 2020 Vision for European Development called flex-security. Somebody has come up with this word,

essentially an oxymoron, thinking that if we aspire to this perpetual mobility whereby we all become continually nomadic, how do we achieve that personal and social security? I am not sure if there is an answer to that. The other question I wanted to address maybe to Francis was that in this morning's discussion we were talking a lot about how we equip our students with skills and competences that may be applicable to many other ways of being an architect or even of transferring these skills into other areas. We argue that an architect is a problem solver, an architect is a creative thinker. This is something with which I fully agree. Yet how many times have we said that and illustrated it outside our own circle? How often have we addressed that question of the employability of an architect? Elsewhere, are there the traditional drawing offices that we have in our minds? I think it is time that we waved at outside. We know that, we believe in that; that is what makes it interesting to be an architect. Many of us here sitting in this room have transferred the skills that we gained many years ago in some of the schools. We have transferred them successfully to different countries, to different elements of our discipline, to administration, to education and so forth. We need to say that and illustrate that and move ourselves up the ladder of these statistics where Alex has shown how low we are when compared to the medical profession and the legal profession amongst others. It is time to stop examining ourselves and proving to ourselves who we are and who are students will be. We need to be very focused and to put this message outside. The ACE is trying to do this with the limited resources within a scope that we have defined as our priorities addressing the directives. These encounters are very useful in order to become aware of the bigger picture, but then at the end of the day, it is necessary to return to the focus and to prioritise. It must not be forgotten that what Europe says, Europe is and Europe wants to be: its culture, its diversity, its knowledge-based economy, its innovation, its sustainability. If we truly want to be part of that and to be competitive as an old continent in a new world and amongst different developments and movements, we need to use the jargon effectively and combine our skills and use our networks to put these messages outside and to address them to the political powers that be, both at national and at European level.

Colin Pugh, United Kingdom

It is very interesting to raise the question of mobility because the statistics that were shown at the beginning show that 90% of schools in Europe now operate Bachelor's-Master's structures. In the UK, we actually have a subset of the criteria: the eleven points of the EU directive are applied to the Bachelor's award. I think mobility is, in general and in the context of the Bologna Accord, inhibited by some of the practices that are operated across some of the authorities at least within the EU and perhaps attitudes in general. Is it possible for the ACE to begin to address the mutual recognition of the Bachelor's award without further testing within any of the member states? Obviously in the UK, a student arriving from an EU member state with a Bachelor's degree, in order to gain the recognition for that degree, will have to pay the competent authority 2,000. If I am wrong in this, I would ask whoever is in fact here from the local authority in the UK that he can confirm or deny that. I would like to know if anyone else has experienced any other practices across the EU which in my view are inhibiting ability and actually potentially discriminatory. I think if we are supposed to have a mobile education area, then we have to do a little more work to ensure it is a little more

fluid. I think the other point to make about graduate experience is that the UK statement, which includes reference to the placements and activity, insists that this is a paying job; it is not practices gaining students to undertake work for nothing. It must be a paid position. We surely all must support that. It is sometimes possible that we might find that more problematic than others and I am not sure how one might legislate for it. It seems to me, however, if it is embedded, then it needs to be recognised by paid employment. Again in the UK, of the 250 weeks that you have to study architecture, 150 are in two academic programmes which are heavily regulated, heavily quality assured and inspected by professional bodies as well as by the competent authority. The 100 weeks spent in practice, while it is described and in a sense charted by students, it effectively has no criteria and has no effective quality assurance system. Therefore, if there is a move in Europe to legitimise periods of professional practice placement - and we recognise that it is a powerful learning environment - then it seems to me that the same level of scrutiny and quality assurance needs to be put in place to ensure that those experiences are in fact valuable.

Fried Buhler, Germany

I am deeply depressed by the scenario Alexander described, but I do not agree with the solutions you suggested. For me, the discussion in the room seems to switch very quickly from a solid statement we had five years ago regarding the five years. It goes from five years education time to a very pragmatic way of speaking about this topic which is very good and extremely necessary as we saw in the last case, but it is dangerous at the same time. This is because I think we are facing a "high noon" situation. Speaking in terms of the ACE and the Green Book for the directive, I think this point needs to be discussed. Do we, the European Schools, retain the duration of five years, or is this no longer a point for us? In this context, I am very grateful for the things that James Horan said about keeping the five years but doing more within this context. For me, this would be the way to do it. I speak not only for myself. We had a unanimous decision of the German Deans' Conference about the five years and we do not follow the compromise of the Green Book. We think this is not a compromise, but a political statement because, at the end of the four-year duration of the academic period of time, maybe for Germany, it will mean that we will have as we had ten or twenty years ago, a directive for schools was written first time, we will have again, a four-year education time. This will last only a few years. Schools have to switch from the present five-year programmes to the four-year programmes. I therefore think that Europe has a certain might to influence the political decisions in the member countries. I think you should not minimise the standard of these five years, because this is linked with content, with maturity and also with money. I see another scenario at the end: that the European architect will be discriminated against in the whole world because we are forced to have five years. This would be a disadvantage for all the Europeans, not only for the British.

Javier Quintana de Uña, Spain

I would like to mention something that relates to the comment from my colleague from Amsterdam and then about the reflection on time management. There is an experience that we have at our school which I think would be interesting to share. We do have an internship programme. This time it is at the undergraduate level, it is at the Master's level; the students

do it in the second, third and fourth year level. In the second semester they go away to work part-time. The intention behind that is that by the time our students graduate, they will have roughly one and half years of working experience. The problem in our case was not professional destinations, even during the crisis it has been easy to find placements; more than half of the destinations are international. This has proved to be very interesting; we complete that time with formal education but that has had an effect on the time management of the rest of the year, which goes back to the earlier comments made. We did reflect on this and wondered which was better: a routine, a sequence, or a workshop style. Everyone agreed that the workshop style was better with its intensity. However, it became a little crazy because we taught it at the weekends which was not efficient, it was not even legal. The students were absolutely brain dead at the end of the first semester after going through such a large number of workshops in all in the different subjects. It was a nightmare! We are currently going through a review of that system; in the third year students have a chance to go for that. I think the most important contribution we can make to this debate is that in terms of time management, what is working very well for us is that subjects are distributed in a more efficient way throughout the semester. This means that perhaps there is a subject which takes you right the first month because it is better that the student has the knowledge of that subject, for example, construction, before getting into the design studio. Not all the subjects are parallel but we have a sequence in that. That is working extremely well, because some of the subjects are taught workshop-style while some of them are not. With this system, I feel we are really achieving an efficiency and a logical efficiency that at the same time is time management.

Manuel Nicolau Brandao, Portugal

The problem we are dealing with is mostly to prepare someone to sign a project officially, to take full responsibility for it. Where will they be prepared to? In the schools? In the professional environment, in the office? Who will evaluate this in the office, which guarantees we are very worried about the quality of the schools and we have a Directive and so forth. As for the professional offices, we do not evaluate them. What do they learn? That is the question. I remember Jean Francois Mabardi a couple of years ago about a commission that evaluated schools and he asked a question: yes, it is very good to have a committee to evaluate the schools, to protect us from the wrong schools and the bad schools, but who protects us from the committee? As far as I remember, nobody answered this. I would like to pose another question. Why do we exist? Sometimes I wonder this: for what reason do Schools of Architecture exist? Yesterday we spoke about evaluation and evolution. I am not afraid if schools here or there are no longer needed. Not five years, four years, one semester, one month and finished? You cannot end. They begin with the eighteenth century but now maybe we can only return to Medieval times and teach them in a cooperative system. Why not? In Luxembourg there are no Schools of Architecture and they build! The architects come from Germany or France. It is not a separate institution.

Constantin Spirionidis, Greece

I am afraid that I cannot close the session with such an existential question! Let me ask if any of the panel members would like to make a final concluding remark.

Selma Harrington, Ireland

I think I had forgotten to answer an earlier question, which was on applied research in schools and what the ACE position was regarding that. I think Colin asked something about mutual recognition of the Bachelor's level. In relation to the applied research and the position of the ACE, I have to say that not a great deal of work has been done on formulating any specific policy. It remains one of the work areas that we would like to develop. Yet what we do occasionally come across through contacts with newer organisation members of the ACE from former Soviet countries in Eastern Europe is that there is sometimes a conflict between practitioners in private practices and the practice where the Schools of Architecture have a mechanism or institutes whereby the academic staff practices at the same time to gain better access, either to public tendering or to research funds as well. Then there can be a conflict between access and a distribution of this resource to others. There is some work to be done to balance the access to work or to public projects. That does not necessarily answer the question about research issues. This issue does however seem to be related to the question of who the drivers of the research are and what the research in architecture is. I leave you with that question. Colin Pugh was asking about the recognition at Bachelor's level. The ACE has another partnership with a network of competent authorities ENACA who deals with leveling issues in that area.

Sven Felding, Denmark

I would just like to make a final statement from my point of view. We are facing tough times again as architects - and again and again! Yet nobody can take my optimism away. Some can build, apart from the architect, some can make plans as well as the architect, but no-one apart from us as architects can fulfill dreams that are in the built and planned environment. That would be my last comment.

James Horan, Ireland

My last comment would be just to remember that education is not about reducing the elements down into pieces that can be understood and boxes that can be ticked; ECTS's are almost an accountant's way of looking at education. Education is what you are left over with when you have forgotten everything you have learnt.

Constantin Spirionidis, Greece

I will not attempt to say anything to that! But I would like to make a last comment on the basis of what Javier mentioned previously. I think that in the discussions that we have been having, the magic word which has appeared is "quality". But in the different lists of qualities that someone might expect from education, the very last is the quality of teaching. The majority of the staff members in Schools of Architecture are recruited either because they are good architects or because they are good researchers. But very few people care about the quality of teaching. This is why I strongly believe that we have to do many things regarding this parameter, the quality of teaching, which is the only possibility we have of stopping ECTS from being an accountant of education. For this reason, I think that we

have to do more in five years - to remain true to the spirit of our discussion - and if possible to introduce the viewpoint of Alexander in the future. This is a concluding remark about this theme, but we have many things to do in five years, if at all possible and if the context permits it.

Session 4

Doing more with less teaching

The reduction of the funds and of human resources also affects the way of teaching. The implementation of the European Credit Transfer System offers the possibility to reduce the teaching time without reducing the credits as the reduced time can be compensated by the students' workload. In parallel, the overall educational system promotes competences, which enhances the capacity of the student to navigate through the offered learning possibilities and to develop a personal path with experimentations on personal interests. This attitude has as a consequence to convey a part of educational responsibilities to the learner allowing the reduction of teaching time while demanding a more efficient pedagogy to be implemented.

Do we need to develop new teaching approaches and pedagogies to encounter this future?

There is an imperative request for a more efficient teaching, which will assure quality under the condition of reduced finances, reduced teaching staff and reduced education time.

Are our schools prepared to implement more efficient teaching approaches?

Do we know how to do it?

Are there experiences to be shared?

Are there ideas to be exchanged?



Chair:

James Horan, Dublin, Ireland

Introductory panel:

Johannes Thordarson, Reykjavik, Iceland

Murray Fraser, London, United Kingdom

Máire Henry, Waterford, Ireland

Adriana Matei, Cluj Napoca, Romania

Marvin Maleha, North Carolina, USA

Introductory Panel

Johannes Thordarson

Dean, Iceland Academy of Arts, Department of Architectural Design, Reykjavik, Iceland

Doing more with less Teaching, Doing more with Students - A Crisis Tale

I would like to start with some introductory words to put things into perspective: Iceland is located up by the Arctic circle out in the Atlantic Ocean between Norway and Greenland. The 320.000 inhabitants like to think of themselves as being peaceful and wanting to live in harmony with its harsh nature. The economy depends heavily on the fishing industry, which still provides almost 40% of export earnings and employs 8 - 10% of the work force. Manufacturing products (mainly aluminium) count for just over 40%.

Except for hydroelectric and geothermal power, Iceland lacks natural resources. The economy is vulnerable to declining fish stocks and drops in world prices for its main material exports. Icelanders have been trying to diversify the economy into manufacturing and service industries in the last decade, including software production, biotechnology, and financial services.

In 2008 the three investment banks of Iceland collapsed taking down the entire financial sector, the stock market, and the currency. The banks lost 200 billion US dollars, exceeding approximately six times the nation's gross domestic production. The effects for the entire society were huge; hard and painful for everyone. Unemployment went from 0 to more than 12% in almost one night. 80% of practicing architects lost their jobs. The universities were faced with a big cut from day one. The students, the teachers, the supporting services of the schools had to rethink the structure of the programs.

The first, and the main reaction of the Iceland Academy of the Arts (IAA) following the obvious cuts in finances was to protect the teaching within the school. It was decided at an early stage to find all possible methods to make the students think they were still getting the true hours of teaching and the respected encouragement from the academics of the school. This of course meant traditional cuts in services. It meant that some painful decisions had to be taken. There were cuts in the services of the library, of the canteens, in equipment provision for the workshops and for the IT division etc. It also meant a cut in elective courses, and in some instances a slight cut in teaching hours. Teachers and staff members did take a salary cut for the first 18 months after the crisis hit the society.

The dissent of the Icelandic public following the economic crash in October 2008 ended up in clear anger and strong demands for an investigation in order to reveal the extent of control fraud in the crisis. Large demonstrations took place in the downtown of the capital city Reykjavik. The IAA decided to make the students aware of the seriousness of the situation by running studio courses that addressed the question of how designers and architects can

contribute in revealing the effects of the crisis, and in reshaping a “new and honest” society. In respect of the seriousness of the crisis it was also decided to find means to address the large number of persons that had lost their jobs. It was a strong belief from the school’s perspective that in building up trans-disciplinary platforms where the meaning of the prefix “trans” is beyond, through, across or over, the critical issues of the situation could be addressed and a true dialogue would lead to positive ideas.

Two platforms were established:

1. Hugmyndahúsið or “The House of Ideas” was established in collaboration with the University of Reykjavik by changing a disused industrial building into an open forum for all disciplines to share ideas, discuss ideas, develop ideas and most importantly create respect and common understanding for trans-disciplinary dialogues. The House of Ideas proved to be a very successful forum where a number of ideas ended as true registered companies with a number of employees. Individuals from a great variety of disciplines shared ideas in the manner of “creative commons”; each one believing he or she could do nothing but benefit from the set-up where the location and the architecture of the building were made of use to frame in a creative environment.
2. Prisma or Prism, a cross-disciplinary diploma program (half a semester) for the unemployed was established in cooperation with the University of Bifröst (a business and law college). The program was established to meet a clear demand as to evaluate a totally new situation (total collapse of the economy, a demand to rethink the structure of the entire society etc.) by means of critical and creative thinking. Through the eyes of philosophy, architecture, design, anthropology, cultural studies, music history, fine arts, marketing, theater, zeitgeist, creative writing, communication and management the program knitted together a variety of dialogues and approaches with the aim of helping all participants to tackle a new platform in a stormy environment. This was supported by first – class lectures from specialists in respected fields.

Now back to the IAA:

The group photo is of most of the second year students from all departments of the Iceland Academy of the Arts (IAA). The students come from the depts. of music, drama & dance, fine arts, and architecture and design (programs in architecture, fashion design, product design and visual communication). The students are all enrolled in their respective BA programs.

The photoshooting is a final performance of a group of about 10 students and is the result of a two week class operated at the beginning of this year (2011), a class the school runs every year and goes under the name of “samtal” or “dialogue”. The point of the photoshooting is to stress the importance for the different fields to cross the borders of their respective disciplines. It is to stress the fact that a small school with 460 students is still not under one roof. It is to stress a clear wish to break barriers, to conquer new territories and to indicate that we must start acting in common.

The IAA was founded in 1999. For the first 2 years design was taught within the dept. of fine arts. In 2001 the dept. of design and architecture was established. Since then 105 individuals have graduated with a BA degree in visual communication, 73 with a BA degree in product design, 72 with a BA in fashion design and 83 with a BA in architecture.







It is our sincere belief that the existence of the IAA has changed the scene in Iceland by working with all the graduates in creating an infantry of designers and architects in a society where most people did not know what design was about. We know we have had an effect in creating communities of graphic designers, of fashion designers, of product designers etc. We have touched on issues that would not have been touched on.

One of the main goals of the programs at the IAA is to tie together different forces and needs of the society into a convincing context between the natural and the man made environment. We are aware that we need a totally new approach in the remoulding of our society where architects and designers can play a major role.

We know we can use simple and easy access to key persons both within the school and within the society even in the international global village which makes it easy for us to adapt the program to ongoing changes within the cultural scene and within the society in general. We believe such a flexibility is unique. By strengthening research tied education and by building up a stronger research unit within design development the dept. we want to strengthen our voice within the society, build up a theoretical and critical research unit in the fields of architecture, design and media.

The school is still without an MA program. Yet we know the MA program will give us a much needed platform to cooperate with the industries, the local authorities, the government and the whole society since we have so far not been able to practice research on a large academic scale. Of course this also means we shall be able to participate in joint international cooperation.

It is our sincere wish to start a trans-disciplinary program at an MA level, because we have proved the importance and the value of design approach and design thinking in restructuring, in finding methods that change and make a difference. The same goes of course for architecture. This can only be done in full respect of required teaching hours in the fields. And with respectful cooperation between academics and students. The right set-up in terms of the physical stage for the studies, the respect for the students and for the zeitgeist at each moment form the basis for doing more with less!

Murray Fraser

UCL Bartlett School of Architecture
+ Chair of RIBA Research and Innovation Group

Doing more with less teaching

From my perspective as an architectural academic in Britain, I feel that the way to look at this issue of how to respond to austerity is through student experience. In other words, what do students get from studying architecture, what are the benefits and pitfalls, and how can we ensure that what we are providing is relevant and affordable?

In regard to the latter point, i.e. how to finance architectural education, if there is one clear message I would like to give is for countries on mainland Europe to resist the disastrous Americanised full-fee funding model that has just been adopted by the Coalition Government in Britain for all arts and humanities subjects from September 2012; this will apply initially in England, and has not yet been agreed for Scotland, Wales or Northern Ireland. The withdrawal of all government funding for teaching of the arts and humanities is bound to have profound results for the subject of architecture. Not only do we feel that it is ethically wrong to rush through a policy that was not even part of the government's election manifesto, thereby changing the principle of tertiary education from a social democratic goal to one that is based on neo-liberal 'free market' principles, without proper consultation or without proper costing of what the new scheme is going to cost, but there is also a naked reality for lengthy 5-year courses such as architecture. Estimates are that architecture students who start at an English university from 2012-13 will end up with debts of around Euro 100,000 by the end, and because of the market rate of interest that accrues on these loans, they will effectively never be able to pay off their debt entirely, even if they were in solid employment for all of their careers. It is a mad and vicious policy, and so I strongly urge continental Europe to reject such a system, and along with this to reject any other neoliberal notions like 'efficiency' in teaching, whatever that is supposed to mean.

From the fascinating data which was presented at the EAAE/ENHSA conference in Chania in September 2011, there appears to be a clear and growing divide in Europe between those wealthier countries, mostly in the 'north', which still have positive economic balances, and the poorer countries, mostly in the 'east' and 'south', which have chronic economic deficits. The latter, many which still retain relatively low staff-student ratios in architectural schools, such as Italy or Greece, are now facing severe cuts of around 25% in their budgets. A few countries, such as Switzerland or Norway, seem to have no such budget pressures, and if anything their state funding for architectural education seems abundant. Then there those countries like Sweden or Britain where there has already been a steady process of year-on-year cutbacks in teaching budgets for over 20 years now, meaning that the budgets for architectural education are now extremely lean, and staff-student ratios are much higher as a result. Currently in the

UK there is a typical staff-student ratio in architectural schools of between 1:20 to 1:25, and staff members cannot see how they can possibly be any more 'efficient' since everything has been pared back to the bone already.

Instead, what one finds in Britain is that the concept of 'student satisfaction' is becoming the crucial test for all academic disciplines. Perhaps the clearest example of this is the ever-increasing importance which is being given to the scores for all academic subjects and all universities in the government's annual National Student Survey (NSS). This survey is run centrally, not by universities, and the results then feed into the league tables of performance of universities and for specific subject areas like architecture. It is a tough system of scrutiny, but in many ways it is also the correct thing to be doing -- even before the horror of full-fee funding system hits home -- as it is crucial that students feel that they are getting the kind of education they need. So what then is a typical student, say at the two-year postgraduate Masters level (ARB/RIBA Part 2), being given in a London school such as the UCL Bartlett or the University of Westminster (my previous employer)? While it is no means standardised, the usual pattern is for 26 weeks of actual teaching in each of the two years of the postgraduate Masters course, during which a student will get one 30-minute individual design tutorial per week as part of their studio unit group, along with other group workshops or seminars as needed to enhance their design work. In addition, they will receive around 2/3 hours of formal lectures a week, and on average about another 1 hour per week of individual or small-group tutorials in relation to modules they are taking on history & theory, architectural technology or professional practice. As to their assessment, they will be expected to present their design projects at a series of public 'crit' review roughly every 2/3 months, and then submit at the end of the year a portfolio which constitutes 100% of their design marks. Other coursework will be in the form of written essays or possibly joint reports, but in no case will they take any sit-down exams. And in general the vast majority of students enjoy and value this current system, with very high satisfaction scores being recorded at schools like the Bartlett and Westminster. Indeed the satisfaction score in 2011 for the postgraduate Masters course at Westminster was a staggering 96% in the National Student Survey, well above what even the most pampered students at Oxford or Cambridge Universities would give. Architectural education is now easily one of the most popular university subjects in Britain and the academic standard of new entrants is increasing year-on-year, also suggesting a satisfied audience.

My suggestion therefore, from a British perspective, is not to cut teaching time or course length in any way, but instead to develop and extend the act of research as the crucial element for enriching teaching and learning experiences. I have to admit there is a bit of a problem here, given that most architects, certainly in the UK, are very reluctant to admit or describe the research element of their work, but a change in this attitude is vital to improving the status and pay of the profession (we should be acting like lawyers doctors do!) Hence the educational system should not be regarded as just 5 years of teaching and learning about the subject of architecture, but of also training our students to become full-blown serious researchers, and above all encouraging them to turn their college work into research projects which can have external agency and to start to develop research interests from early on that they can then pursue in their professional careers after university. This was certainly the ethos of the postgraduate Masters course that I ran at Westminster, and now I have been asked by the UCL



Nick Szczepaniak, 'A Defensive Architecture', University of Westminster (winner of 2009 RIBA Silver Medal and joint-winner of 2011 Archiprix International competition).





Ron Herron, image of 'Walking City' project taken from the Archigram Archival Project (<http://archigram.westminster.ac.uk>).



Flyer for the Ashgate book series on 'Design Research in Architecture'.

Bartlett to help to pioneer that institution's goal of ensuring that research-led teaching is being fed directly into undergraduate work as well; as such, this is my goal with my Bachelors-level design studio there.

What this means collectively is that we need to regard our institutions not as fixed 'islands' but as part of a porous, fluid network in which the larger spaces and initiatives that we create around them are what becomes most important -- again with the idea of research being the

glue that holds the network together. How, then, can we develop and publicise research-led teaching that is being done in architectural schools? There is of course no simple magic answer, but I will offer a series of suggestions. Firstly, it could be achieved by setting 'live' real-world projects with a direct social impact, such as colleagues and I have done with some of the Westminster Masters students in developing projects for old historic settlements in the Palestinian West Bank. Secondly, we can help by using our academic contacts to try to publish those aspects of our students' coursework which is genuinely at or near to the cutting-edge of academic research. This seems to be an admirable goal of EAAE's proposed new 1:1 annual journal, and I have also been doing this to some extent through co-editing *The Journal of Architecture* (Routledge), which has published a special issue of essays from the EAAE Student Writing Prize (guest-edited by Hilde Heynen), and also through our ongoing publication of those student essays which win the annual RIBA Dissertation Medal. Thirdly, we ought to start to make better use of the internet as a free collective resource which also develops serious academic aims as an aid to teaching and learning. The aim should be to share as much information as possible on the internet that all architecture students, wherever they happen to come from, can use and learn from directly themselves. This was undoubtedly the underlying purpose of my joint creation at Westminster of the Archigram Archival Project (<http://archigram.westminster.ac.uk>) as an open, free, online collection of all of that group's work. To date, nearly 115,000 people have visited and made use of the website.

And finally, and perhaps most importantly, we can contribute to a better teaching and learning environment by promoting architectural design as the central research activity in our universities. This is the aim of my new 'Design Research in Architecture' book series being published by Ashgate, along with my other series co-editors who are Jonathan Hill and Jane Rendell from the UCL Bartlett, and Teddy Cruz of University of California at San Diego/ Estudio Teddy Cruz. This series is available for practitioners, academics, PhD by Design students, and such like, who feel they have an excellent example of design research they would like to publish. We can only ever enhance our subject when all the research areas are integrated into a more cohesive strategy, which means that for us today the crucial area is design research. So far it remains underdeveloped, even marginalised, within architecture, and so unless we ourselves value and promote it, then how can we expect our universities, building clients, and wider society to do so? Therefore I would conclude by saying that we don't want less teaching in architectural education -- are doctors, lawyers, etc really proposing to do this in light of the current economic crisis in Europe?? -- but rather we need a newer and fresher approach teaching that is genuinely research-led so that new generations of architects will then be able to take this approach out with them into the world of practice.

Máire Henry

Head of Department of Architecture, Waterford Institute of Technology, Ireland

The national context in Ireland is challenging. The educational landscape at Waterford Institute of Technology faces many government imposed changes which may negatively impact on essential resources and quality teaching. Many of these changes are similar to what colleagues from other European countries have already presented over the last few days at this conference in Chania. Our budgets have been reduced and there is currently an embargo on staff recruitment.

Dealing with reduced resources in a creative way can help minimize damage. Some solutions to date involve module sharing with other disciplines and availing of modules from other schools as electives. The experience I would like to share today is not one of these but it is a supplementary form of teaching where by senior students are trained to become tutors to junior students. This programme has been developed in many other schools worldwide and it came to our attention through a research group originally in the computing department of university of Limerick in Ireland. There it is called 'Peer Assisted Learning' or PAL for short.

Each year a group of our final year students along with any staff who wish to participate take part in a workshop on 'effective tutoring' lead by experts in this area. After the training they are monitored and keep a log book of their interaction with students in the 2nd year of their studies. The student instructors do not replace staff. They are seen as an addition to structured staff contact hours. The student tutors assist in design studio projects as well as organizing book reading sessions.

Both groups of students benefit from this programme. The senior students develop skills in mentoring, leading and knowledge sharing which will be useful later in a professional context. The junior students learn from their peers in a more relaxed environment. Research has indicated that there are many factors influencing effective learning. Carol Rogers (1983) reduced this to 10 principles of learning. Some of these include:

- Human beings have a natural potential for learning
- Much significant learning is acquired by doing
- When threat to the self is low, experience can be perceived in differentiated fashion and learning can proceed.
- Self-initiated learning, which involves the whole person of the learner, (feelings as well as intellect) is the most lasting and pervasive.

At the Department of Architecture here at Waterford Institute of Technology, Ireland, we have been running this programme with great success for the last 4 years. The student instructor keeps a note of each tutoring session he/she has with the junior students. He/She does not mark the student or influence in any way the main lecturing staff. They do however keep in regular contact with the main staff and free to share any concerns they might have.



The feedback has been positive. Both groups of students have said that it was the best educational experience they had during the academic year. The senior students find it easy to help the junior students solve their design problems. They are not allowed to give answers – just direction from experience. The workshop trains them in useful tutoring techniques.

I have noticed that many students now tutor each other using the techniques. This has the added benefit of reinforcing the strong comradery that usually dominates the culture within schools of architecture.

‘Moll an óige and tìochfaidh sé!.

Adriana Matei

Dean, Technical University of Cluj Napoca, Faculty of Architecture and Urban Planning, Cluj Napoca, Romania

The higher education of architecture dates back in Romania to the year 1892, when it was set up as a private school. In 1897, the first state school of architecture was established as a department of Beaux Arts of Bucharest. Until 1970 the Institute of Architecture "Ion Mincu" as independent institution in the field of architecture education was the unique forum in Romania.

In 1970 other three new architectural education centers were established in 3 major cities in Romania: Cluj-Napoca, Iasi and Timisoara which curriculum referred to a three year long study. The students received a first (3 years) diploma (B. Sc. Degree) but about 60% of them went to complete studies and graduated the second stage in Bucharest.

In 1983 these three sections of architecture were arbitrarily abolished and until 1990 Bucharest remained the unique center of architecture education in the country.

In 1990, after many memorandums and letters sent to the Ministry of Education, this Ministry admitted the opening of former schools of architecture in these three regional centers of Romania. At the beginning the status of these three schools was as Section of Faculties of Civil Engineering of Technical Universities.

In 1998 the Architecture School of Cluj obtained the status of Faculty of Architecture and urban planning as the ninth faculty of Technical University. In the last years the other two schools of architecture from Timisoara and Iasi obtained the same status. The FAU-UT-Cluj has now 848 students, 79 teaching positions from which 42 are full time occupied.

Comparison between the Schools of Architecture (State Academy) in Romania

Pedagogic education (similarities)

The similarities are issues from the restart in 1990 of all the Romanian schools of architecture in the same conditions (6 years of studies, 360 credits, cycle I and II integrated and title of Master included) and more or less the same structure of the plan of education (the first 3 years of compulsory disciplines and the last 3 years of elected and optional disciplines regarding urbanism, interior design, anthropology and architectural restoration). Also the diploma is the same: ARCHITECT DIPLOMA. The profession is one of the four liberal professions which are so called "regulated" by the European Community.

Since 2001, the FAU-UT-Cluj has two postgraduate studies of 2 years and 120 credits in the field of restoration and urbanism.

Since 2009 to our faculty was accorded by the Ministry of Education the status of Institution which allows organizing the Doctoral School of 4 years and 240 credits in the architecture profile.

Scientific research (differences)

The difference between the schools of architecture has originated from the status of these three regional schools as faculties of the technical universities as oppose to the status of total independence of UAUIM Bucharest. The rules of the Universities benefits of total independence and the norms of scientific research and promoting the teachers in the engineering field are very exigent regarding these regional schools, but often it is inappropriate concerning the need of creative profession. For this reason, the last evaluation of the Romanian universities after scientific research criteria, made by the Ministry of Education, place the three regional schools of architecture in the first category of value and UAUIM Bucharest in the second one.

Financial autonomy (differences)

The same dependence of regional schools from the Technical Universities makes the representation in the senate to be very weak (because of percentage of the students) and so, practically null. Therefore all infrastructures, equipment, spaces, subscribers, library and so on depend on the vote of the senate. In the same time all financial resources of UAUIM Bucharest rest to be geared by own necessity.

Status of European Reglemented Professions

Difficulties of the Erasmus and doctoral Romanian students

Governmental politics regarding the missing special references to the architecture profile in the recent education lows have as consequences many difficulties for our students. They're required partial diplomas for accessing the higher level of study in the European countries. Our school does not have B. Sc. Degree after the first three years of study and the Master degree is included after 6 years of study. Many times they must submit to the supplementary exams for admission on this level.

Situation on the Losts Students

Statistics of the last 5 years show the fact that we have lost almost 42% of the students on the way of education (the average time for a complete study will increase from 6 to 9 years). So, maybe an intermediate diploma is needed. Still, the Romanian experience of the so called "conductor architect" has been contested by the OAR (RAO), and since 2004 they are not given any access to the profession by the Ministry of Education.

The master diploma in our country is delivered only by the Faculty of Urbanism of UAUIM Bucharest. In the restoration specialty is missing the master diploma in the schools of architecture, but it exists some postgraduate deep academic studies which offers PG specialist in restoration diplomas in Bucharest and Cluj.

On the other hand, the Master School in Restoration existing in Babes-Bolyai University of Cluj admits students of many other profiles and the time of studies is spend in favor to general and

professional architectural culture, in detriment of deep specialty. This Master is rather informal then formal one.

Regarding the Subjects of the 14th ENHSA AEEA Meeting

SESSION 1 - Doing more with less finance

There are three sources to attract financing from outside of the state budget in the Cluj School of Architecture.

- The first one is the contractual research such as: some grants offered by the Ministry of Education, architectural project contracts with tertian institutions and European Programs like FP7 and so on. The financial resources of the Ministry of Education was drastically reduced because of the crisis, the bureaucratic system of European Programs was increased and remained only the resources from the tertian institutions. The last ones are also affected by the crisis and they have diminished their own financial resources.
- The second financial source was in these last years the Cultural Programs offered by the National Order of Architecture or by the National Union of Architecture such as: workshops, summer or winter schools, symposiums, conferences, and book editing.
- The third source was the sponsored activity of the Non Governmental Organization of our students (AStA – Architecture Student Association) which are organized the Architecture's Days in 2005, 2007, 2009 and 2011, with real success like a veritable festival of architecture, the cycle of conferences entitled "See you Thursday", winter and summer schools, expositions, competitions, etc.

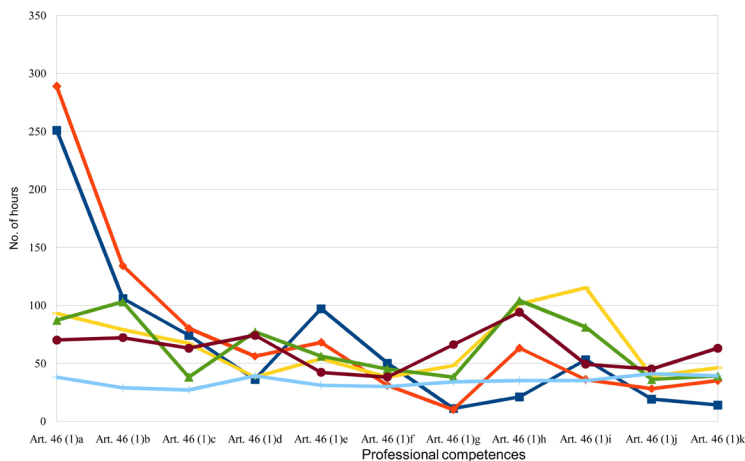


Fig. 1

Graph abilities.



Fig. 2
Student projects at the Bucharest Architecture Biennale.



Fig. 3
Diploma projects at the Bucharest Architecture Biennale.



Fig. 4
ZA 2011 pavilion rendering.



Fig. 5
Guests at the national conference ZA 2009.



Fig. 6
Metis centre for restoration.



Fig. 7
One of the conferences in the NVJ series.



Fig. 8
National competition presentation for the L2 students.



Fig. 9
International jury for a student competition.



Fig. 10
A new space of the faculty.

SESSION 2 - doing more with less human resources

Regarding the human resources, there is a big hiatus between the teaching generations in our School of Cluj.

- a) We have a third age generation of teachers who began their university career in the same time with the birth of the architecture School and they worked exclusively to didactic and scientific research until 1990. Their professional practice after 1990 didn't affect their university career.
- b) The second age generation of teachers is composed by the architects who evolved from production after 1990 and they have been involved into private activities and neglected their university careers.
- c) The first age generation is that of the 30 doctoral students involved in the top of scientific research and whose motivation for university career is total. They are the future of the school, but their access to leadership will be only after 7 to 10 years.

Because of this situation, the next two years the school will remain without leadership - composed from architects. Therefore the independence of the school will be in question.

SESSION 3 - Doing more with less time

The quality of the architecture students is diminished more and more in the rhythm of the general education. A first problem is the lack of financial support of the parents and the need of self financial support. This fact leads to absence and neglecting of didactic attributions of the students. Because of that, the time of education increased, instead of decreasing.

The reduction of the education time can be done only if whole financial support is provided by the government. In case of graduation failure the return of this support is required.

Architecture is a very complex and mature profession. We do not believe that one can exercise this profession after just four years of studies.

In the case of reducing the education time at five years, introducing the 6-th working day of the week (Saturday) is needed.

SESSION 4 - Doing more with less teaching

Allow us to present you the methods for improving the teacher's work in the UTCN understanding. They are the following:

Cancellation of the vacant position of the professors or readers degrees;

Reduction of the supplementary norm;

Reduction of some of indices of the salary in the holidays period;

Stoppage of the competitions for occupied superior didactic positions;

Augmentation of the didactic norm, scientific research norm, and contractual research studies, application, and so on;

Reduction of the teaching salary to 75% since 2009;

Consequences of this method:

Reducing interest of young teachers for the academic carriers;

Increasing the interest of all teachers for the private practice of profession in detriment of teaching tasks;

The trap for the 3-th age professors, who must assume all the tasks of the Faculty;

General Conclusions

The assumption of the Chart of Bologna will be necessary for reducing the number of general architects in favor of increasing the specialized architects.

In our opinion the 4+2 years of studies is a better variant for a while;

The new method of learning was introduced in all European schools by many forms of recognition like national and international competitions, workshops and summer or winter schools. The stages of professional practice between European schools were also experimented.

The long life learning will be sustained by Post graduated Studies and Doctoral Schools; but the status of Post graduate studies (as formative studies) becomes weaker in the favor of the Master studies (as informal ones). What are we going to do about this?

The signature right of practice as a full architect is obtained in Romania after two years of practice in architecture agencies and an exam and it is "offered" by the OAR (Romanian Organization of Architects). This two years stage and the subscription to OAR membership are beginning to be expensive for the young Romanian architects. Therefore, the number of OAR members is drastically diminished in the last years. We must do something in this direction!

Allow me to congratulate the organizers for their competence and interesting discussions and I want to thank them for giving me the opportunity to present the Faculty of Architecture and Urbanism of Cluj. The following pictures show some aspects of the various activities of our school.

Debate

James Horan, Ireland

I think there is an energy in what Marvin Malecha has just said and I think it will stimulate comments and questions.

Yves Schoonjans, Belgium

I have a question for Maire Henry. From the start I think we talked about private projects. I think one difference is that we do not have a pilot project between graduates and undergraduates, but between graduates and graduate students. The idea is that a small group of local students are coupled with small groups of foreign students, in our case Japanese students because we have the EC-Japan network on the topic. We have interactive Master's classes so I think that for us it is better than it was before. On the first level, regarding practicalities and a kind of buddy system so we have had integration of the school. Secondly, students are learning in an inter-cultural duality, so they have cross-cultural competences; it is very important that they are gaining from more complex issues inside the topic itself because of the research design questions that have been mentioned. Finally, it is helpful because it prepares the small groups of local groups for next year when Japan will have the Master's classes there. So for us, as you can see, the groups are at the same time students and teachers, they are learning and teaching, but we do not have any reduction of teacher contact hours. We have even more teaching hours; it is another way of teaching, it is a more facilitating method of teaching. My question therefore is: does this new style result in a reduction in contact hours for students, is it more a question of replacement or is it in addition to competences, an addition of all kinds of competences?

Maire Henry, Ireland

I think I would like to reiterate the point that it is additional. It does not in any way constitute a substitute for contact hours. That is very important because we have qualified people who are teaching and on our programme we have already established the appropriate number of contact hours on particular modules. This is therefore all supplementary. There are however many avenues that can be taken. I just highlighted one particular area of that programme; in fact, the same senior students also run a vertical studio, which has the benefit for all our years to work together in the studio. They work together for a week, with brainstorming as a side issue, and that is directed by the senior students. It therefore has the added benefits of some of the things which have been highlighted. For example, first year students get to know each other, it breaks down barriers, Erasmus students get to know the faculty very quickly and so on. To answer your question, however, it does not reduce teaching hours: it is supplementary. We encourage it, even to have it outside the studio. Last year, in fact, it happened in many cases in informal settings, not just on the campus but sometimes in the evening in pubs and apartments! It just happened in an informal way. I should also say that we give credits to the students; we do run it as a

module, so even if the senior students do not get paid, they do get five credits for tutoring peers, which is very much part of it and is on a number of assessments they have had to do in that particular module. That is why we brought in professionals to run it as well. There is an established protocol also, an established way of running it, along with some flexibility. I hope that answers your question.

Susanne Komossa, The Netherlands

I would like to come back to the question I posed on Sunday and which Murray touched on again here. This is the question of how to integrate research into design, firstly in the sense of teaching and also in the sense of models. We, for example, have started to invite senior students to contribute to our tutorials and to give presentations of what they are doing, provided that it is of interest to our programme. I do not know if this saves money, but it may increase quality. It also allows for a greater exchange when the students have to do research. The staff is always already finished or polished, but when we see a PhD student struggling - it is probably seen in the Irish model too - it makes it easier for the student to identify with and to see him/herself doing research. My question would be to the audience: are there interesting models which you are applying in order to integrate research with teaching? This may be due to cuts but perhaps also to increase quality. Perhaps Murray could also elaborate a little further?

Murray Fraser, United Kingdom

I agree entirely. I think it is very much early days; I think we are trying to find ways to deal with this. In the schools I know of, one of the key things seems to be to get staff members to do PhDs by design and to do it as something of a test mechanism. This is so the staff member is seen to be going through this process and bringing this back to students through lectures and through their design tutorials and so forth. My colleague Jonathan Hill at the Bartlett would be an ideal example of that, who is part of an actual exam and both runs the PhD by design programme and he was the original guinea pig who did it as well. That is one of the first steps. When it gets more established, I think you are right in saying that there could be a much greater integration of PhD students into the teaching framework. I do not usually like self-criticism, but I think we do not do enough of that at the moment. We could integrate PhD students more into the teaching. It is beginning to happen. As we take on board large numbers of students, so there are more people around, more diverse backgrounds, there seem to be more obvious ways in which they could contribute to particular design studio areas, be it housing or redevelopment for example. There is a bigger pool of expertise, and there are large numbers of PhDs by design which are also increasing. However, I think it is very early days yet. Moreover, I do not know how this is at St Lucas. I do not know if it is even conducive to have credits because when you have people graduating in years to come, exactly how quickly they could be absorbed into this new model? However, I think this is definitely something to be seen as positive; the general tone seems to be right, though I do not think we have enough details yet of the mechanism.

Michael Eden, Sweden

We have had quite a lot of experience but there are some difficulties, especially at the Bachelor level where the basic teaching could go a little far from the PhD and the specialised subject matter. I think that one of the things is that we should think about the shift in perspective from teaching to learning. You can teach design as you are learning and at the same time make students aware that this is a process of thinking. PhD students are very useful on the Masters levels. You can design the contents in another way. Thirdly, in our system, the PhD must have some kind of pedagogical credit in order for the candidate to get the degree. This happens sometimes, it is no problem, you can also have an extraordinary candidate with a very specialised subject which has no relevance at all to some students.

Murray Fraser, United Kingdom

Yes I agree. We might also be finding people - and you may be finding this yourselves - who are now doing PhDs and who are actually actively demanding the right to teach. Up until now the attitude has been of students wanting to finish their thesis and not being bothered with other things! Now the same students are feeling that they are not wanted by anyone, whereas part of the process they are part of is to teach. This means we are having to find ways in which to do this. I think it is quite an interesting thing. I think the levels that were mentioned is also quite an interesting point. When I went to UCL and I read the sheet of paper that said it wanted a research-led teaching profile for undergraduates, I thought it couldn't be that, but that is suddenly what is being tried out. It is quite interesting as well being a challenge. I am not entirely sure that everyone is doing it, but I think it is an interesting challenge to be thrown down to say almost from the start of your architectural education that you should be becoming part of this discussion. It is not just something that happens at the higher end of the process.

James Horan, Ireland

Let me just ask a question that has occurred to me during the course of this morning's conversation. Do we think that teaching a subject which is creative is different to teaching other subjects? Let us take the following as an example. If you take mathematics at a very basic undergraduate level, there is usually only a single answer to the problem set. A design problem however can have multiple answers. In a way, I think we have an added responsibility as teachers of creative disciplines to find not only ways of being very clear about how we teach but also how we assess. This may be an area for discussion.

Colin Hughes, United Kingdom

I just wanted to respond to your question and then pick up on something that some people have also said. I think that some years ago, the profession and professional bodies within the profession itself were both very clear about what kind of "product", as it were, they would like from the architecture school. They wanted someone who could very competently deal with what we might regard as conventional areas of knowledge within the relevant fields of practice. I think the shift that is changing now and which is leading many schools

in the UK - ours is the same as UCL - is that teaching with research is normal. PhD students teach undergraduates, they are graduate assistants, all of these things happen. I think that this shift is actually being made possible by a new recognition from professional practices in architecture globally. Certainly most of the larger ones - though possibly not all - have realised that research is really where their future lies. The economy of architectural practice must generate and innovate, it must create new knowledge, new procedures and new ways of looking at problems that have been generated by climate change and other societal factors as well. I therefore think that there is generally a much more welcome environment for innovation in teaching. The other thing I would say about teaching is about the other emphasis that I feel has changed over the years. Once upon a time, titles used to come up like "Teaching Methodologies" or "Teaching, Learning and Assessment Methodologies". These days, however, people are talking much more about learning as the primary activity and the teaching and assessment as supporting activities. These words are now coming in a different order, with the emphasis being placed on learning. The thing that they need most under pressure is time. Curiously enough, certainly from my point of view coming from the UK - and I think that Murray and other people would probably reinforce it - is that perhaps teaching time and that kind of dynamic can, as Marvin said, be dealt with creatively without being diminished or reduced in quality or value. The thing that I think is interesting is time. Time is for me the most important component of learning. Given enough time, everybody will learn something! The interesting thing that Alex mentioned yesterday was that the debate about how long it takes to generate competences is for us a very open one in the UK. Some people may take longer than others to generate what we might call the competences that are required by the professional bodies and authorities; other people can acquire them in a faster period. It is also possible that some people may take longer and produce higher levels of innovation. The knowledge and the originality that they are displaying will be of potentially greater value. There are of course also some very talented people who can do both things at the same time! They can produce highly original work in a shorter time than others. Thus I think that time is a very important component. What students in the UK are buying when they pay £9,000 a year - or whatever they are currently paying, which is slightly less than that - is time. The UK situation is interesting in that, unlike everyone else here, we may not be anticipating education cuts because the £9,000 fee will represent an increase in the funding of teaching which has in fact been recognised by the government commissioned reports as having in a sense absorbed all sorts of efficiencies over the last fifteen or twenty years and the time has now come to create a new benchmark from which we can proceed. To repeat, I think that time is a very important component. In other words, students are paying £9,000 a year to buy the time to learn. That is actually what they are doing.

Hansjoerg Hilti, Liechtenstein

For me it is interesting that we talk a lot about teaching; we have another word which is coaching. One of my queries is whether you reduce the recipe of teaching; it is not a question of putting in, it is a question of bringing out. My explanation is that teaching creativity is about bringing out. Too much teaching, at least from what I see in our school and in others, is more a question of putting in. You can see first year students where a lot of good teachers try and

bring out what is in the students. Then we get some lecturer who tries to put in and this is inhibiting training in creativity. What is happening? The more students grow with the knowledge being put into them, the less creative they are. Maybe the word "teaching" can be very dangerous in our profession.

Herman Neuckermans, Belgium

I wanted to answer the question asked by James as to whether there is a difference between teaching creative subjects and other subjects. I think there is a major difference. Creative subjects require you to follow a sequence of creative process, of being exposed, and of then having time to incubate these ideas in order to come up with a solution and elaborate on it. So the incubation time is something which is not present in problem solving, which is rational. We know the method that you have to follow can come up with the answer immediately, so incubation is time also. The problem now in teaching is to how to find this fine line or equilibrium between giving students the time to incubate the problem but without becoming lazy. You have to make them come up with ideas after the incubation but not so much so that they fall asleep!

Constantin Spirionidis, Greece

I would like to keep James Horan's question alive because for me it is something extremely significant. Before coming to that, I would like to make the remark - of course it is not the first time it will have been heard in this room - that all of us are definitely ready to accept that teaching is the central core of our professional activity. However, I strongly believe that teaching is always neglected in our discussions and our preoccupations and it more or less loses the significance that it should have. Let me give you an example which has come to mind following Johannes's presentation. It showed spaces for teaching which were nice spaces glorifying teaching in a School of Architecture. If it is the case that the teaching is in the centre of our preoccupation, the spaces have to be glorified for teaching. Yet think about classrooms in our schools. Or, compare the classrooms in most of our schools with the offices for teachers. It is a kind of semiotics of space which represents the gravity which we give to the act of teaching. The second remark related to this is that for very many years in this association we have tried very hard to bring the discussion around to teaching. However, the questions of what we teach, why we teach what we teach and how we teach it remain the most difficult questions, questions which are left more or less unanswered. If you do not believe me, there are two publications which have been produced addressing these questions. Read these books to see how difficult it is to answer these questions. If we genuinely want to renew our conceptions of architectural education, I strongly believe we have to think about the teaching and assign it the appropriate place. At the end of the day, as I mentioned yesterday, we are amateurs in teaching. We teach for the most part in the same way that we have been taught. We have sometimes - though not always - adapted critically what we have already learned from our teachers and we do not significantly advance from what we experienced as students. There, there is a huge area of activities that we have to invent. The other paradox that can be noted is that even as teachers of architecture we have difficulties to speak about the way we teach,

while the other disciplines and more specifically, education as a discipline, uses as teaching approaches practices which are very common in our milieu. We hear of learning by doing as a learning method, we hear of problem-based learning, or more recently, project-based learning, but who is the most appropriate person to speak about the project? It is strange that a teacher in a high school uses a project conception of teaching in order to teach while we use the input approach. We are specialists of the project, but teaching is a project. As a project, it must have objectives; it must have a process; it must have tools. All these things are our own knowledge which in most cases is not applied in teaching. I strongly believe that these discussions that we have here need to be in some way revitalised; the usefulness of this reflection needs to be examined in order to understand what it is that we do. Now I am coming to the question raised by James Horan. If the creative disciplines require a different teaching approach, and in my understanding of course they do, then we have to have the knowledge and the consciousness that we are teaching a creative discipline. We do not believe that we belong to the creative disciplines. Our institutions, our frame, fall either under engineering, or they fall under the humanities. There are of course Schools of Fine Art where they group the creative disciplines together, but it is my estimation that the majority of Schools of Architecture belong to technical universities, that is to say, they are grouped under the heading of Engineering. In other universities, they are grouped under the Humanities. Therefore, we never treat ourselves as a creative discipline. Yet what we really do is to create. Obviously, we use the engineering disciplines to make our creations better, but this is not our main objective. And obviously, we use the humanities to make better designs, but this is not our main preoccupation. Our main subject, our central point is to create. It is there that we need this collectivism in order to exchange experiences and possibilities and to advance in a more systematic way what and how to teach the art of creation. What we do now when we teach is to tell our students what they have not to do! We always tell them: "No, this is not good, you have to do this or that." We are always saying what the student must not do, but we almost never speak to them about what they have to do. This is not in the concept that Hansjoerg Hilti mentioned previously as a input logic, but as a guide and as part of an effort to assure competences as an objective of this process. Fortunately, we have the opportunity in the future to develop our own teaching language, which is something that we really need.

Johan Dewalsche, Belgium

I think I have an answer to the question of how to prevent the students from falling asleep while incubating! The answer is research. Seriously speaking, I think that when students are on a design project in an assignment that asks them to do research and design, which is needed to be able to make a good design, students really have very strong commitment. I think a period of incubation will give them arguments afterwards; they will tell us how they want to be assessed because what they present will be the result of exactly what they have discovered during the incubation period. If we are able to understand what they present to us, because we are the connoisseurs of it, then they would have a very good presentation. This is because they know very well what they are doing and why as well as what it is about: that is exactly what they will present. Therefore, I think that incubation is the most important

period of designing and of researching and the research itself is the incubation part and can be part of the incubation period.

James Horan, Ireland

I think I will now ask each member of the panel to make a single statement about teaching and what they would regard as a key point so as to bring to a conclusion to the discussion.

Johannes Thordarson, Iceland

I would like to make a short remark on what has been said in order to sum up what I wanted to say. First of all, I would like to agree totally with what Colin said about innovation in teaching. Innovation in teaching is crucial in every sense of the word. I have a tendency to say to our teachers that innovation in teaching, whether it is in mathematics or whether it is principles of buildings, or whether or not it is studio work, means we also need to read the students. We need to use our first year. Students would say we have to sense the vibe. It is important that we feel the students and we understand who they are and know how we should approach them. Students are very different from year to year, they vary a great deal and we put the emphasis on adapting the teaching to that. You may give the same mathematical problem to all the students, but you will get ten different results, ten different methods, none of which are wrong. This means we really have to look into the ways of teaching mathematics. If you were to ask a professor of mathematics, there are very many ways to teach mathematics, all of which can be creative. Herman Neuckermans talked about putting in and bringing out, saying that the latter is more important in teaching. I have to say that they are both relevant in teaching; they should be. Otherwise, in my opinion, we are not concentrating so much.

Adriana Matei, Romania

I will try to respond to the question. Ten years ago I introduced a course model of creation in architecture. It was the experience of another professor some years ago and I discovered there are three directions. One direction into context physically, spiritually or culturally, is the way we visit, to be exalting some point discovering the context through negation towards transformation. Another model is of course semiotic, which means a philosophy of semantic problems, of a semiotic problem, of symbolic architecture. It was informed by mathematics. Again we can have some context. With many successful disciplines, they have applications in the projects directly and can be discussed with the students. We pass with the movement of the students and they like it very much. This is the model of creation in architecture. It is the closest discipline to professional practice.

Maire Henry, Ireland

I have three short quotes to make. The first one: I think it was Socrates - correct me if I am wrong - who said we are trying to teach or coach our students to think. I believe that when we are teaching or coaching maths or music, art, dance, archaeology, architecture, then

we are trying to get our students to think creatively about the process. Secondly, there is an old Chinese proverb: tell me, and I forget; show me and I remember; involve me and I understand. Thirdly is an Irish quote, which translates as: encourage the youth and they will succeed.

Murray Fraser, United Kingdom

I was taken by Constantin Spiridonidis's question of how education was changing. It strikes me that there are some quite perennial standards. There are the two main models. The first is the Periclean oratorical model then there is the Socratic dialogue which is our beloved tutorial system. Now there are obviously a few more mediated things through new technologies and so forth which are screen-based learning models. I am quite taken by the fact that a lot of our students take their digital learning software off YouTube - where would we be without YouTube! - so there are those types of things going on. But I think that things have changed. In my experience, thinking back to when I was at college and comparing that with now, there seems to be a much more two-way fluid system which, while not totally equal, is certainly less dictatorial than when I was in college. I think that I agree entirely with Johannes Dewalsche that we could put research into that. If we put research into this, to me it goes back to making it less passive and more directed. This seems to be the mechanism, so I could not agree more and I think that this is where the big changes are coming. I also hope that we can push them further in the future.

Marvin Malecha, USA

You asked me for words of wisdom. Socrates said wisdom lies some place between true knowledge and opinion. That is what we do when we teach architecture: we go between true knowledge, through design or teaching, as you might put it, and the right opinion, because what we propose to do is to create something which does not exist. I like the word teaching. A long time ago, when I was first made a professor, an elderly woman walked up to me who was part of the university and said, "So what is it that you profess?" You do not profess something without having done the scholarship. Being a great teacher is all about great scholarship.

James Horan, Ireland

I think this topic is something that we must return to in a much more structured way in the future as part of a theme of core subjects for this event. It is so central and so important that I often feel it might be worthwhile if an entire conference were devoted to this type of subject and where members of our group were invited to present real-life examples about how they go about their teaching. I have no doubt that if that happened, we all might learn quite a lot. I would like to make two final points. The first one is that to be a good teacher, there has to be both passion and performance. To make a comparison: a teacher is really a bit of an actor. The single biggest advantage that you can have if you are an actor or a teacher is that your audience probably will not fall asleep. Of course, if they have fallen asleep, or become part of Herman Neuckerman's incubation process, they learn nothing. They do not even hear

most of what is going on! Marvin's reference to being a professor reminds me of one of the definitions of the learning process and of being a professor and a lecture given by a professor is the contents of information right from the professor's mouth onto the notebook of the student without ever passing through the mind of either! However, on a very positive note about trying to be more economical about things and to see how good teaching has a real economic benefit, it has this one. If the quality of the teaching in your school is really good, the number of the students who will leave the programme will be less: retention will be better. If retention is better, there is an economic gain to the nation you come from. In fact, it is a responsibility that goes way beyond the scale; and what you do helps the economy if you are a good teacher. I think on that we can close the session.

Session 5

Conclusions and Future Perspectives



Chair:

Constantin Spiridonidis, Thessaloniki, Greece

Introductory panel:

Per Olaf Fjeld, Oslo, Norway

James Horan, Dublin, Ireland

Stefano Musso, Genoa, Italy

Introductory Panel

Constantin Sprididonidis, Greece

The last session is dedicated to summarise what has been presented and debated upon as well as to investigate possibilities and open the floor to ideas that will indicate ways forward and themes for the forthcoming event.

Before the chairs of each session speak specifically on the content of their session, I would like to offer some information regarding the Qualifications' Framework. The European Commission launched the European Qualifications' Framework some three years ago. The EQF is an official description of the different levels of education that develop in Europe from the primary school to the Doctorate level. The EQF replaced and encompassed to a great extent the Dublin descriptors that were the previous framework that had the tendency to be formalized at a European level. Two years ago after launching the Life-long Learning Programme a new version of the EQF appeared, more or less similar to the previous one, entitled European Qualifications' Framework for Lifelong Learning. The European Commission wished, as a consequence, to develop the Sectoral Qualifications' Framework. In other words to define the different sectors-domains of knowledge that would form the graduates' profile for each sector. In this context, the question arising was where architecture would be situated? Architecture was officially included in the humanities, which has always been the case in the last twenty years at least. In order to have a broader perspective they called this sector 'humanities and arts'. This fact was enhanced and supported by the fact that in the early seventies there was a shift for architecture from an engineering discipline into a humanities one. In the sixties in most cases architecture belonged to engineering which explains why architecture for a long time belonged to engineering faculties or polytechnic schools. After that this view has been reconsidered and a number of schools of architecture have since become parts of a university closely related to humanities.

To be operational towards the formulation of the Sectoral Qualifications' Framework, the European Commission asked the Tuning Project team to undertake the task. A number of people from different disciplines were invited, including myself as coordinator representing architecture, as well as people from other continents. So far two meetings have taken place, one in Thessaloniki and another one in Bilbao and our effort was to find common grounds in humanities. Despite the fact that architecture has since belonged to humanities, there seems to be no clear-cut research-funded domain allocated to pure architecture. In order for architectural research to be funded by the European Commission it has to compete fiercely with purely defined traditionally humanistic domains such as history, urban studies, sociology, psychology etc. etc. or from the engineering sector Architecture would have to compete for research in the environment, computation, structural engineering etc. with the respective pure scientists of those sectors.

This fact has led discussions towards the need to overcome the artificial split of architecture to either humanistic or engineering research pursuits. Furthermore, it has urged the discussion and reconsideration of architecture as a whole. It was admitted that architec-

ture is neither pure humanities nor engineering. Despite the importance of both aspects and sectors for a complete architecture, they are not its only features. It was debated and formulated that architecture has always been about the creation of space, or simply about creation and creativity. In order to create, architecture surely needs the humanities and engineering. However, the focal point is creation.

Hence, in this context and according to this logic architecture would sit comfortably in a new sector entitled 'Creative and Performing Disciplines'.

I would like to point out that this is not a new initiative and thought. A few years back ENHSA in collaboration with ELIA (European League of Institutes of Art) and Polyphonia (The Thematic Network of Conservatoires) had a conference in Tallinn at which we tried to define similarities and communalities among the creative disciplines as an independent sector. The document that was produced was circulated to the Ministers that deal with such issues. I cannot give you further feedback for the Qualifications' Framework for Creative and Performing Disciplines as this is under development. This document will be elaborated in November and my intention is to bring it to the forthcoming meeting of Heads so that we can have our input.

I would like to take the opportunity to announce the success in the application we made to obtain the third ENHSA Project. This new Project is entitled ENHSA: Inhabiting the European Higher Education Area. All partners involved in the Project have received all application documents and we look forward to start working on the Project at the beginning of October.

James Horan, Ireland

There a couple of things I would like to say: we are in a time of crisis to some extent. There is a real problem not just in Europe but right across the world with the financial structures and the way we perceive how society should be. I have no doubt that over the next few years there will be massive changes in the way the world does its business. I think perhaps some of these changes might occur in banking and when they do occur we will be working with new paradigms. This should be no problem to us because the nature of what we do is to explore the possibility of new paradigms. Diversity very often produces positiveness in the likes of the creative person. In fact some of the greatest works of art have been the result of oppression, adversity and the result of pressure. I would be in the school of thought that says that the glass is half-full and we need to be really positive about where we go from here and with any downside there is an opportunity. I say to my staff each morning 'today I am at the desk of opportunity'. And if I do not believe that I should close up my bag, leave the School and do something else, but the day you do not think there is an opportunity, you have lost. How can a Head of school influence a staff in these areas? This is the question Constantin Spiridonidis has just asked. The very moment the head of a school becomes a winger or a complainer or a person who identifies the problems and the negativity they are no longer entitled to be the Head of the School. If you are a skipper on a ship it is not your job to tell your crew how bad the storm is. It is your job to get them out of it and get them safely home to their family and friends. As a head of school you have also this responsibility. You can't see the negative. You have to be realistic about the things you decide to do but

if you don't cloak it in a suckering of positiveness to make it palatable to swallow you have failed to do your job. This is all I have to say. The glass is half-full.

Per Olaf Fjeld, Norway

Reality has come back to us in a certain way. We know that nature has a stronger force that we can never compete with. We know that thousands of kids are starving. We know the ecological aspects of life and we can know that all this contributes to a complexity that we have now the capacity to handle. At the same time we try our best to bring this into each one of us.

For me the best teacher or the best way to teach, is the one person that has this capacity to see this complexity and at the same time has the capacity to understand its architectural potential, in other words how it can intervene architecturally and within architectural space. Any programme in that sense will be limited to any complexity I am trying to speak about, although the programme itself is important. The closer we can get to this complexity within the limitations of architecture the stronger are we to pursue an architectural consciousness. It is also very interesting that for a number of years we have prepared for change. This room has prepared us for change in many different ways. Maybe this is one of the reasons why, despite the complexity out there, this has not had a negative impact on the audience. We are rather full of optimism or at least we have not given up.

At the same time, since this is so abrupt in a way that our thinking might be too direct. We are acting too directly, meaning that we have not enough clarity between a decision and what a decision entails in the long run. It is that sort of maturity that a head of school needs to have. He or she has to act and at the same time but they have to see what each move contains in the long run. There is certainly one thing that is quite important today: it is to state the importance of architecture and of architectural education. In what way do we do that really? We cannot learn it per se, we cannot only write about it. Somebody else can really tell us about it. We are not being religious about it but we are talking as in some sort of a belief that Architecture and architectural education are important. If we do not have this belief, I do not see how we can proceed really. That again requires from each one of us that we take a stand to state whether it is important or not. It is a great opportunity in our life to state it clearly. That occurs to me with important questions out of these last three days. What is the new definition of architectural education? What is the definition of an architect? We talk a lot about openness. That architects have the capacity to do a lot of things. I think we all agree that we are all trained to have that capacity and we continue to train that capacity. However, I do not think that this does not mean that we have defined our position and the definition of an architect. That gets us back to something that this room has come up with.

It was Constantin Spiridonidis that brought about that word. That is within the idea of competences. I will try to pursue it. It is more imperative than ever before that each school has in some way the capacity to bring out its own profile. If we do not have the ability to bring our each individual profile to the openness we are talking about we will lose track. The competences each school pursues and in what way it is pursuing them should become

very clear. This is opposite from being in an isolated island. If we are going to communicate, if we are going to have a strong relationship with one another, the idea of the profile and the competences are absolutely essential. It is absolutely essential to define what this is. It is as important to know that we will not necessarily agree on this. Within this disagreement collaboration will occur. A great opportunity again, since we have been working on this for years and without forgetting the vocabulary that we pursue and without forgetting the complexity that we have to make simple through certain means but at the same time to have the awareness I tried to talk about at the beginning. This is a great challenge. Since we are prepared for this, and since the reality is there the opportunity to react within that I find very strong.

The reason for this question is that I do not know exactly where architecture has moved. I will repeat the comment. What is the content of that architecture that once was called architectural culture? What is that culture now? Do we have the ability to define it, or can we say that everything is open, can anyone do anything? Is there within the profile of an architect, or do architecture and architectural space have the quality and energy of space that we know, that particular 3d space? Does it still have a meaning for us, or some of us? That again we can agree or disagree but the profile should be clear on it. That we should make a stand on architecture not an individual stand, but we have to decide where we would like to move architecture.

In other words, we should have a dream and some vision within the complexity that we are part of, in which architecture culture exists, within our desires and our needs. At the same time, it is very important that its profile has its resistance force. It is important to pursue that force and bring it into a presence. In other words we do not wish to simplify profiles but to attack or to challenge the resistance forces. Also these days have been challenging in the idea of the local. We talk a lot about the global, but the challenge to what the local is in relation to the global on many different levels including that each school is settled somewhere is also a very challenging pursuit. Each school has an identity of its own and the idea of belief, which I feel is essential in the world we live. Architectural education is in some way to find a way in which these inspired to understand or further understand the way the world goes. We are talking about different types of programmes in which social consciousness, the humanities per se is the definition of the programmes is the one that pursues the programmes and that is a different take on it. I find that very interesting to pursue. If we mean that architecture has an identity of its own, what is then this relationship between person and space? Where is it moving and where is it going to move?

Not to generalize a problem or the challenges we are facing: we have an awareness of commonness that has come out very clear in the last three days. However we continue to accept diversity. Communication as it has been mentioned many times, is essential. The idea of understanding each other and the idea of judgment are themselves important.

Stefano Musso, Italy

I would like to take the cue from Per Olaf, using his last two sentences as a way of looking into the future. If we have to be aware of our commonness but to also to be proud, to defend and value the differences we can turn into a homogenization. In this sense,

information, sharing of experience, confrontation, not to get to a definition that can be accepted by all, is crucial. We can work towards a more precise definition but I always think that the most important thing is not to define things but to leave things, to manage things, to give sense and meaning and not to be in an ivory tower but to share. In my session 'doing more with less human resources' I was happy that the human being was in the centre of our discussions, at least in the intentions. As it always happens, we lose the human being while we discuss and we go back inevitably to structures, forms all those things that are necessary but the human being such as the professors, the colleagues, the students and admin staff lose themselves. They do not know where and who they are. We have to be aware while speaking of the global and the local that we all talk about our own reality. I know that while having learned a lot while I have been here, when I go back home, to Genoa, I will try to take advantage of what I learned while taking into account the reality. Let me give you an example: I totally agree with the affirmation that having less one becomes more creative. One finds new ways of teaching, or even in selecting our staff. However, there is a great difference between a school and staff that is temporary, permanent etc. In a school of 99% permanent staff members I see it difficult to change things. I can bring in my own enthusiasm but I cannot persuade anyone to change attitudes. I cannot see the way to overcome such issues. In the last years, we have worked extensively on the goals, but goals are strongly linked to the reality being it financial, social, political to which a school is attached and which expresses students and staff. The work we have pursued all these years on competences has to evolve further. I have repeated many times that this is the way to overcome the differences. However the means, tolls and time available to overcome these differences are strongly influenced by the local conditions that we can only overcome the difficulties by sharing experiences, by making our staff aware of the realities of the changing world very fast. They can be passive or have an aggressive attitude of stubbornness but our students will hopefully react to that. This is why since yesterday I have insisted on the importance of our students and the feedback they can provide. The local community can be of influence, as well as this Association. If each of us feels at home this will eventually happen, even if this is not planned. It is important to have a human and respectful attitude willing to work in different ways according to the possibilities of the environment we work in to cooperate, to build through our students, the architects of the future, the teachers of the future, the contractors, the politicians, a better world. With respect to the limited resources, of the historical and cultural background, the possibility to share on the future the richness of relationships, avoiding any homogenization, any devaluation of our consciousness, of our capability of critical and creative thinking that are not two separate and opposite realities but must be pursued together. I do not think that there is creativity ever with no criticism. Any critical thinking that only intends to destroy, or to react to what others propose is not very useful for the human kind. We have to maximize and to get the best of the creativity and the best of the critical thinking, the technical, the scientific, the rigorous. We have to try to avoid the risk of the binary oppositions of the 'either or'. It has been very important since Aristotle to separate and distinguish things in order to understand, but in some way we have to realize that things are 'both and', despite the contradictions and unpredictability this entails. We realized that from Manuel Delanda's keynote lecture. I am offering this optimistic view and I feel I would not have survived without it. Being

pessimistic is perhaps right but this is what is important if one anticipates avoiding a disaster. Reality is difficult enough as it is. Doing more with less human resources will be meaningful only if the accent is put on the 'human'.

Constantin Spiridonidis, Greece

It is interesting, following Stefano's point, that the word human has come to the forefront. The point is that we never know what and who the students are. Our discussions have to take into account the students' identity. I feel that the students' presence is quite important for our meetings. So far this has not happened it is because we have not had a concept of who can be invited.

Debate

Ebbe Harder, Denmark

The themes we have tackled in this meeting are important including human time and human resources in times of crisis. The answer to that given by governments is to introduce cuts in the way education is funded. In the last 250 years society has been industrialized. Does architectural education run the risk of heading that way?

Another way of looking at it is perhaps to see how industrialization has affected education. In the last 30 years it has been suggested that the way out of the production crisis is to create a knowledge-based society. Is it then a good idea to reduce funds for education? Is this not paradoxical? Shouldn't an Association like ours, the EAAE, take a position and produce next year another Chania statement to relate education and society in times of crisis?

Constantin Spiridonidis, Greece

This is a very interesting point indeed. We can request more of course but we have to deal with the cuts as well.

Hansjoerg Hilti, Liechtenstein

On your point suggesting the participation of students and a possible concept I would propose EASA who are very active and have four to five events every year with up to 400 students. They get no help of professors but are very conscious of what they do.

Colin Pugh, United Kingdom

To extend the point raised by Hansjoerg referring to EASA which is an event-based network of students which is problematic if you have an issue or an agenda-based event. I have raised this with Manchester but we need to create a network, which would be more issue-based. At the time they declined that opportunity but as Hansjoerg said they declared their independence and I can tell you that as a Head of Manchester they got a considerable amount of money from Professors. ENHSA is an organization of Heads of schools of architecture who have access to students. It seems to me not difficult to construct a network of students. Whether they attend or not, whether we move into a slightly different format for getting data and feedback from students I don't know but it is a powerful and important point that you have made. I can say that one thing that did happen as a result of EASA was that a UK network was regenerated with the view that they were issue-based organization and not an event-based network that they would be interested in taking part in the politics of architectural education rather than perhaps projects that are more of a student-centered event. They have also a very quiet agenda, which might be about attempting to join with a larger network. There are possibilities but the power to construct what you are suggesting is in this room within the membership of ENHSA and EAAE. The second network that would be worth seriously considering as a result of the conversations of Sunday morning would be with ACE

and the consultation document from the EU on the changes in the wording to the Directive is that we do not appear to have an effective European network that brings together national or regional networks of heads of schools of architecture. Many people have become aware from the presentations this week that there is definitely, according to our colleague from St Etienne, something in Holland that connects the academies schools, there is something in the Nordic alliance which is clearly a regional one, the UK has one of course and more or less every other member state has them, and if we were to respond as a body to consultations from the EU we might need to consider as a body should we say a more linear organization but one which actually that had a representative from every regional or national organisation of heads of schools of architecture.

Constantin Spiridonidis, Greece

Thank you for the suggestion to be more political. However, I have to explain that ENHSA is a Project with limitations that do not allow it to be political. EAAE on the other hand could be political and in collaboration with ACE could make things happen.

Stefano Musso, Italy

Before my presidency, I remember that we already have had meetings with the official regional-national networks of heads of schools of architecture. In France, all directors were present. However the interest is not always so vivid. In Italy only slightly over 50% was present. In Spain we had a meeting again. It is a good suggestion. The EAAE Council has to take this on board but we know more or less what happens in different countries.

Herman Neuckermans, Belgium

I would like to comment on Constantin Spiridonidis's point on the creative disciplines that architecture has been listed as. I felt a bit sad about the fact that in each of these occasions one mentioned a lot of disciplines and I fully agree. The need for having these creative disciplines as a separate sector is real. But at the same time I feel a little bit strange that it seems that we throw the baby with the bath water. Engineering is completely not mentioned any more when in fact the origin of architectural education in Europe stems from the 19th century on the one hand we had the Academie des Beaux Arts and on the other hand a bit later we had the Polytechnic approach which indeed in the 20th century evolved and created all these polytechnic schools the other ones faded a little bit away. The polytechnic schools, in turn, in the sixties-seventies had a crisis. People there found that there were not enough of humanities and concern for real users and there was a shift towards humanities. I have fully experienced that shift and I devoted my life to architecture, but at the same time being in a school of engineering, I know what happened to engineering. I think that we have to beware of looking at engineers as if they still live into the sixties by being purely analytical. They have become creative too. I see here an i-pad. What is it? Was it made by architects? No there is a creative discipline here. But inside there is a lot of engineering, which is creative thinking. I feel that in the future, fully endorse what you are saying that having a different sector for the creative disciplines is ok but architecture still needs some engineering.

Constantin Spiridonidis, Greece

I need to clarify that architecture certainly needs engineering inasmuch as it needs the humanities. The difference in the discussion is based on a question: What is our central professional objective? To my mind, the central objective is to create space, buildings, architecture and in order to create architecture we need engineering knowledge, knowledge from the humanities to support this creation. The difference to belong to either the one or the other sector would not be that significant. However, to my mind it is. It is significant because being under the umbrella of engineering one creates a way of thinking and I think that the way a creator thinks is not the same that an engineer thinks. The same goes for a scientist coming from the humanities: they do not think like creators do. As a consequence we need to creatively incorporate these knowledge domains and re-centralise our educational preoccupations to architectural creation. Nowadays, the capacity to create, to innovate, to experiment towards innovation is something that has financial consequences. By concentrating on creativity and architectural creation we would probably see architects to have part of the responsibility for, participation in and contribution to the creation of something like an i-pad. The fact that architects do not apparently exist in the creation of an i-pad is the very result of having imprisoned architecture within subjects remote from creation itself. This is the challenge for our discipline and our duty as educators to reinstate what is happening by rendering architects as specialists in creation. This is a need for our society in times of crisis and for our fast-changing world.

David Vanderburgh, Belgium

This is my first time in Chania and I kept quite up till now. I wanted to listen. I have to say that I am pleasantly surprised because I expected that there could be nothing more boring than spending three days shut in a room with a bunch of directors of architecture schools. I am very pleased and proud to know that this is not the case at all and there were a lot of serious and important things that made a lot of sense and many important things said.

The word you were looking for, Constantin, was 'demand'. That brings me to my point. You know the old theory of the humors that we have and determine our moods. It is not a bad theory because there are humors like the bile humor and all that sort of stuff. We have been traditionally good at being melancholic. This is an easy mood to strike, we get suddenly sad, sit down, be mourn our fate and so on we can also be very positive. The message that is coming from the panel this afternoon, also with measure and a certain amount of strategic thinking we can be angry and we can fight. I think we have to be ready to do that too.

Catharina Dyrssen, Sweden

I would like to thank the panel for the four positive attacks. I would also like to remind us all of the fifth one: the Research Declaration. I think this is a real step forward and that it could be used to boost relevance of architecture to society, and to a knowledge-based society. I was very inspired by some discussions on creating learning environments. I would propose that as the theme for the forthcoming meeting of heads next year. Creating learning environments in architectural education with possible subthemes, educating educators, as Johan Verbeke suggested, but also architecture in transdisciplinary situations. To get into that as it is in the air, when in fact we could learn from one another.

Constantin Spiridonidis, Greece

This is a great suggestion that we will seriously take into account for next year.

Stephan Maeder, Switzerland

Our school is quite resourceful for the moment but we have some other problems. We are one of the last faculties where knowledge comes from the profession to the school. All the other faculties live on the school itself. On the other hand, we have researchers that bring knowledge from inside the school to the teaching. That way people do not fit together and it is hard to make them work together. This is also a very important question: how you mix people from practice outside that have big egos but little knowledge of pedagogy with researchers that have methods but not such egos. Talking about learning environments, what comes from outside and what comes from inside is important. When you do research as a university of applied sciences the idea is to make architects that are better when building.

Nikolau Bradau, Portugal

This is a kind of farewell for me as this is my last year as head of school. I met the EAAE for the first time in Paris some twenty years ago and from then on I enjoyed every moment, and all our encounters were useful for my thinking, my pedagogical thinking and the evolution of my school. Thank you for all.

Aart Oxenaar, The Netherlands

Dinos when we came here with the 'less is more' in our mouth but our automatic reaction was that 'less is a bore'. However, having been here for a couple of days I will go home with the idea that 'less is a chore'. A core of that chore will be for us as heads of schools to retain room to move. I made a point last year and I heard many people speak about that. How as those responsible for the development for the school can we retain enough room to move? It was also good to hear that what in Dutch we call 'holly houses', how they were willingly put up for discussion. To begin with one of the most difficult ones, tenured staff, but also money and contract fixed on buildings, or craftsman machines, forced numbers of students but maybe also to our own addiction to specific ways of acquiring our money. That has been put for discussion and we are thinking how we can move and how we can keep enough room to move. I am not so much of a soccer specialist but I did learn one thing from them, which is: 'keep your eye on the ball' regardless of what is happening around. What, in our case, is the ball? Getting the right students, right teachers doing the right thing. You said it very clearly James Horan, and that is basically all there is to it. All the themes that link up to that have been discussed in the last few years. Even now that the ball might be in discussion a bit more and we have to look a bit better, we are prepared. We have discussed themes like quality control, selection of students, peer reviewing, visitation and accreditation, all the elements we need to know if we want to know where the ball is supposed to go. When I came here I brought something that I would like to give to Constantin Spiridonidis not knowing that it might serve for me as a conclusion for this session. That conclusion comes from an axis of two countries in a secretive way to steer these meetings from Ireland and the USA. Somehow over the last few days I saw

these two men having breakfast, lunch, dinner etc. and so it happens in our school that are Irish twins and it was suggested that we should have t-shirts selling our school and something should be on it. I came up with one liner, which is American. Marvin Malecha you have to give us the receipt of coming up with great one-liners. I think one liner comes from Mr Burnham that made the Chicago plan: 'Make no little plans' includes both fighting and dreaming but above all keeping your eye on the ball and trying to know where it should, might or would go. Thank you Constantin.

Constantin Spiridonidis, Greece

Thank you for your kindness and your contribution to forgetting what this organization entails. Thank you all for your hard work and constructive participation.

James Horan, Ireland

Ladies and gentlemen, I am sorry if I appear to be giving the last word, but maybe this is not the last word. I was a little bit concerned at the start of this session that because we were trying to be economic in the way we looked at the various resources that schools of architecture need that we might have been sending a message to Brussels or to other politicians, that we as schools of architecture are prepared to reduce what we do and limit the quality. I am delighted as a result of this meeting and the level of positivity that we are able to go away knowing that in no way are we going to reduce things. We are just going to do things better. Having heard what Art said about Marvin Malecha and I meeting almost secretly, I almost suspect having rakis or God knows what Americans and Irish, I was not going to give you the final two quotations that I felt were appropriate because they are both by Americans, but at the risk of appearing to be surreptitious I will give them to you anyway. Two Americans said about opportunity, and the bog word that came out of this meeting was opportunity. Henry Ford said: 'Failure is the opportunity to begin again more intelligently'. This is fantastic and we have work to do, as heads of schools we have huge work to do. As Edison said: 'Opportunity is missed by most people because it is dressed in overalls and it looks like work'. I would like to thank Constantin Spiridonidis and Maria Voyatzaki as past president and the other past presidents that are sitting with me here, for the unbelievable work, dressed in overalls or not, that they engage with every year to make this event a possibility. You cannot even begin to imagine the richness that has come out of all these years of dedication and I offer my personal thank and the thanks of all of you as well as those that are currently swimming in the Mediterranean for all they have done, which is absolutely extraordinary.

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